

University of Mysore

THE CALENDAR

FOR

1940-41-42



VOL I

BANGALORE CITY :
PRINTED AT THE BANGALORE PRESS, MYSORE ROAD
1942

UNIVERSITY OF MYSORE

1940-41-42

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HIS HIGHNESS

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DESCRIPTION OF THE COAT OF ARMS

“The common seal of the University contains the Mysore Coat of Arms with the subscription in Sanskrit ‘Nahi Jñānena Sadrisam’ meaning ‘there is nothing comparable to knowledge’ and the words ‘University of Mysore’ with the Kannada equivalent ‘Mysore Visva-vidyanilaya’ circumscribed.”

THE ALMANAC FOR 1941-42.

- NOTE.—1. On partial holidays* all the institutions will work from 8 A.M. to 11 A.M.
2. On New Moon Days, the University Office will work from 1 P.M. to 5 P.M. and the other institutions from 8 A.M. to 11 A.M.
3. Partial holidays will not be granted in the Medical College and the Medical School.
4. Varamahalakshmi Vratam, Sri Krishna Jayanti, and Gauri, will be observed as holidays in the Women's Colleges.
5. Penultimate Saturdays will be holidays for the University Office.

* G indicates General Holiday.

P indicates Partial Holiday.

JUNE, 1941

1	Sun	Colleges re-open after Summer Vacation. M.A. and M.Sc. Written Examinations begin. Report regarding cases of shortage of attendance in respect of M.B.B.S. second examinations.
2	M	
3	Tu	
4	W	
5	Th	
6	F	
7	S	
8	Sun	Last day for receiving attendance certificates for second examination for Final M.B.B.S. and Second M.B.B.S. Part III
9	M	
10	Tu	
11	W	
G 12	Th	
13	F	
14	S	
15	Sun	Official observance of His Majesty the King-Emperor's Birthday.
16	M	
17	Tu	
18	W	
19	Th	
20	F	
21	S	
22	Sun	Preliminary report of admissions.
23	M	
24	Tu	
25	W	
26	Th	
27	F	
28	S	
29	Sun	Second examinations for the Final M.B.B.S., and Second M.B.B.S. Part III, begin.
30	M	
		M.A. and M.Sc. <i>viva voce</i> examinations.

THE ALMANAC FOR 1941-42.

JULY, 1941

1	Tu	
2	W	
3	Th	
4	F	
5	S	
6	Sun	
7	M	
8	Tu	Vyasa Pournima.
9	W	
10	Th	
11	F	
12	S	Meeting of the University Council.
13	Sun	
G 14	M	H. H. the Maharaja's Birthday. Publication of the results of the M.A., M.Sc., and M.B.B.S. Examinations.
15	Tu	
16	W	Dakshinayana Punyakala.
17	Th	A Bill to establish and incorporate the University passed by the Legislative Council, 1916.
18	F	
19	S	Last day for receiving applications for the L.M.P. second examinations.
20	Sun	
21	M	
22	Tu	University incorporated, 1916.
23	W	●
24	Th	● Bheemana Amavasya.
25	F	University Regulation published, 1916.
26	S	Meeting of the Academic Council
27	Sun	
28	M	
29	Tu	Garuda Panchami.
30	W	
31	Th	

AUGUST, 1941

1	Fr	Varamahalakshmi Vratam.
2	S	Report regarding cases of shortage of attendance in regard to L.M.P. second examinations.
3	Sun	Sravani.*
4	M	
5	Tu	
6	W	
G 7	Th	
8	F	
9	S	
10	Sun	Sri Krishna Janmashtami.
11	M	
12	Tu	
13	W	
14	Th	
15	F	
16	S	
17	Sun	
18	M	
19	Tu	
20	W	
21	Th	
22	F	
23	S	
24	Sun	Gouri. Ganesha. Last date for receiving attendance certificates for L.M.P. second examinations. Pattabhishekam Day
P 25	M	
G 26	Tu	
27	W	
28	Th	
29	F	
30	S	
31	Sun	

* Those who observe Sravani on the 6th August may have a holiday on that day instead of on the 7th; for the Educational Institutions of the University 6th and 7th August will be general holidays.

SEPTEMBER, 1941

1	M	
2	Tu	
3	W	
P 4	Th	Ananthachaturdasi.
5	F	Lunar eclipse.
P 6	S	Shab-e-barat. Meeting of the Oriental Library Committee.
7	Sun	
8	M	
9	Tu	
10	W	
11	Th	L.M.P. second examinations begin.
12	F	
13	S	Sri Krishna Jayanthi. Meeting of the University Council.
14	Sun	
15	M	
16	Tu	
17	W	
18	Th	
19	F	
G 20	S	Mahalaya Amavasya. Solar eclipse.
21	Sun	
G 22	M	Commencement of Dasara.
23	Tu	
24	W	
25	Th	
26	F	
27	S	Sarasvati Avahana
G 28	Sun	Durgashtami.
G 29	M	Mahanavami.
G 30	Tu	Vijayadasami.

NOTE.—Dasara Holidays in the case of the University Institutions will be from the 20th September to 3rd October (both days inclusive) and in the case of the University Office, 29th and 30th September.

THE ALMANAC FOR 1941-42

OCTOBER, 1941

1	W	Convocation.
2	Th	
3	F	
4	S	
5	Sun	
6	M	
7	Tu	
8	W	
9	Th	
10	F	
11	S	Announcement of the results of the L.M.P. second examinations.
12	Sun	
13	M	
14	Tu	
15	W	
16	Th	
17	F	
18	S	
G 19	Sun	Deepavali and Naraka Chaturdasi.*
20	M	Balipadyami and Scout Day.
G 21	Tu	
22	W	Ramzan.
G 23	Th	
24	F	Last day for receiving applications for the Pre-Medical and M.B.B.S. Examinations.
25	S	
26	Sun	
27	M	
28	Tu	
29	W	
30	Th	
31	F	

* (27th day of Ramzan—Holiday for all institutions.)

THE ALMANAC FOR 1941-42

OCTOBER, 1941

1	W	Convocation.
2	Th	
3	F	
4	S	
5	Sun	
6	M	
7	Tu	
8	W	
9	Th	
10	F	
11	S	Announcement of the results of the L.M.P. second examinations.
12	Sun	
13	M	
14	Tu	
15	W	
16	Th	
17	F	
18	S	
G 19	Sun	Deepavali and Naraka Chaturdasi.*
20	M	Balipadyami and Scout Day.
G 21	Tu	
22	W	Ramzan.
G 23	Th	
24	F	Last day for receiving applications for the Pre-Medical and M.B.B.S. Examinations.
25	S	
26	Sun	
27	M	
28	Tu	
29	W	
30	Th	
31	F	

(27th day of Ramzan—Holiday for all institutions.)

DECEMBER, 1941

1	M	
2	Tu	
3	W	
4	Th	
5	F	
6	S	
7	Sun	Pre-Medical and M.B.B.S. Examinations begin.
8	M	
9	Tu	
10	W	
11	Th	
12	F	
13	S	
14	Sun	
15	M	
16	Tu	
17	W	
18	Th	
19	F	
20	S	
21	Sun	Christmas Holidays.
22	M	
23	Tu	
24	W	
25	Th	
26	F	
27	S	
28	Sun	Bakrid.†
29	M	
30	Tu	
31	W	

* NOTE.—The Christmas and New Year Holidays in the case of educational institutions will be from the 24th December 1941 to 8th January 1942 and in the case of other institutions from the 24th December 1941 to 1st January 1942.

JANUARY, 1942		
G	1 2 3	Th F S New Year's Day.
	4 5 6 7 8 9 10	Sun M Tu W Th F S Announcement of the results of the Pre-Medical and M.B.B.S. Examinations. Meeting of the University Council.
G	11 12 13 14 15 16 17	Sun M Tu W Th F S Last day for receiving applications for L.M.P. (March), M.A. and M.Sc. Examinations. Uttarayana Punyakala.
	18 19 20 21 22 23 24	Sun M Tu W Th F S Last day for receiving attendance certificates for the B.T. and Intermediate Examinations. Rathasaptami. Last day for receiving attendance certificates for the Pass, Honours Preliminary, and Diploma Examinations.
G	25 26 27 28 29 30 31	Sun M Tu W Th F S Madhva Navami. B.T. Degree Examination—Practical. Last day of Muharram.*

* Provisional.

THE ALMANAC FOR 1941-42

FEBRUARY, 1942

1	Sun	Last day for receiving attendance certificates for the Honours Final, Engineering (Degree), and L.M.P. Examinations.
2	M	
3	Tu	
4	W	
5	Th	
6	F	
7	S	
8	Sun	Intermediate Examinations begin.
9	M	
10	Tu	Sivaratri.
11	W	
12	Th	
G 13	F	
14	S	
15	Sun	Ash Wednesday.
16	M	
17	Tu	
18	W	
19	Th	
20	F	
21	S	
22	Sun	Pass, Honours Preliminary, and Diploma Examinations begin.
23	M	
24	Tu	Honours Final, B.T., and Engineering (Degree) Examinations begin.
25	W	
26	Th	
27	F	
28	S	

MARCH, 1942		
P	1 Sun 2 M 3 Tu 4 W 5 Th 6 F 7 S	Holi Feast. Lunar eclipse. I.M.P. Examinations begin. Meeting of the Senate.
	8 Sun 9 M 10 Tu 11 W 12 Th 13 F 14 S	Last day for receiving attendance certificates for M.A. and M.Sc. Examinations.
G	15 Sun 16 M 17 Tu 18 W 19 Th 20 F 21 S	Lunar New Year's Day. Meeting of the Oriental Library Committee.
P	22 Sun 23 M 24 Tu 25 W 26 Th 27 F 28 S	Sri Rama Navami.
G	29 Sun 30 M 31 Tu	Id-Meelad.*

* Provisional.

APRIL, 1942		
P	1 W	Easter Holidays, 2nd to 4th. Good Friday.
G	2 Th	
P	3 F	
	4 S	
	5 Sun	Easter Day.
	6 M	
	7 Tu	
	8 W	
	9 Th	
	10 F	
	11 S	
P	12 Sun	Tamil New Year's Day.
	13 M	
	14 Tu	
	15 W	
	16 Th	
	17 F	
	18 S	
	19 Sun	Basava Jayanti. Sri Sankara Jayanti. Sri Ramanujacharya Tirunakshatram.
	20 M	
	21 Tu	
	22 W	
	23 Th	
	24 F	
	25 S	
	26 Sun	Publication of the results of University Examinations.
	27 M	
	28 Tu	
	29 W	
	30 Th	

MAY, 1942

1	F	
2	S	
3	Sun	
4	M	
5	Tu	
6	W	
7	Th	
8	F	
9	S	
10	Sun	
11	M	
12	Tu	
13	W	
14	Th	Ascension Day.
15	F	Last day for receiving applications for Final M.B.B.S. and Second M.B.B.S. Part III.
16	S	
17	Sun	
18	M	
19	Tu	
20	W	Last day for receiving M.A. and M.Sc. theses.
21	Th	
22	F	
23	S	
24	Sun	
25	M	
26	Tu	
27	W	
28	Th	
29	F	
30	S	
31	Sun	

JUNE, 1942		
1 2	M Tu	Colleges re-open after Summer Vacation. M.A. and M.Sc. Written Examinations begin. Report regarding cases of shortage of attendance in respect of M.B.B.S. second examinations.
3 4 5 6	W Th F S	Corpus Christi. Last day for receiving attendance certificates for second M.B.B.S.—Part III and Final M.B.B.S. Examinations.
7 8 9 10 11 12 13	Sun M Tu W Th F S	Official observance of His Majesty the King- Emperor's Birthday.*
14 15 16 17 18 19 20	Sun M Tu W Th F S	Preliminary report of admissions.
21 22 23 24 25 26 27	Sun M Tu W Th F S	Second M.B.B.S. Examination—Part III, and Final M.B.B.S. Examination begin.
28 29 30	Sun M Tu	M.A. and M.Sc. <i>viva voce</i> examinations.

* Provisional.

JULY, 1942

1	W	
2	Th	
3	F	
4	S	
5	Sun	
6	M	
7	Tu	
8	W	
9	Th	
10	F	
11	S	
12	Sun	● Publication of the results of the M.A., M.Sc. and M.B.B.S. Examinations.
13	M	
14	Tu	Bill to establish and incorporate the University passed by the Legislative Council, 1916.
15	W	
16	Th	
17	F	
18	S	
19	Sun	Last day for receiving applications for the L.M.P. second examination.
20	M	
21	Tu	University incorporated, 1916.
22	W	
23	Th	University Regulation published, 1916.
24	F	
25	S	
26	Sun	
27	M	
28	Tu	
29	W	
30	Th	
31	F	

THE UNIVERSITY OF MYSORE

CALENDAR FOR 1940-41-42

Vol. I

INTRODUCTORY

THE University of Mysore was the first University to be founded in the Indian States. For over twenty-five years the two State Colleges were affiliated to the Madras University. And it was felt that the time had come to effect certain changes with a view to adapting the educational system of the State to the actual needs of its people who number about six and a half millions, the State having an area of about 30,000 square miles. A scheme for a University was accordingly prepared in consultation with the educational experts of the Government of India and the officials of the State. A Bill to establish and incorporate a University was introduced into the Mysore Legislative Council in June 1916, which was unanimously passed on July 17th. It received the sanction of His Highness the Maharaja on the 22nd July 1916; and on the 25th a *Mysore Gazette Extraordinary* published the Act establishing the University. The first meeting of the University Council was held on the 12th August 1916, and the first meeting of the Senate on the 12th October following.

A Bill to amend the University Act of 1916 received the assent of His Highness the Maharaja on the 6th January 1933. The main features of the amended Bill are to constitute another University authority besides the Senate and the University Council, *viz.*, the Academic Council, responsible for the academic organisation of the University; to enlarge the Senate and make it more representative of popular interests; and to create a class of life-members of the Senate and to give representation to Municipalities, District Boards and Associations. The amended Act was published as Act III of 1933.

Act XII of 1939 to amend the University Act of 1933 received the assent of His Highness the Maharaja on the 1st July, 1939. The amendment enables the University to affiliate

institutions within the State. Under the provisions of the amending act, the Principals of the affiliated colleges will be *ex-officio* members of the Senate, and the Principals and professors of affiliated colleges will be members of the Academic Council like the corresponding members of the constituent colleges.

The University is State-supported except for the income derived from fees and from the endowments for the award of some of the prizes and scholarships.

The University has some features which distinguish it from the older Indian Universities. The Vice-Chancellor is a full-time officer and has control of the executive. The Colleges are adequately represented both in the Council and in the Senate of which latter every professor designated as University Professor is a member. Increased emphasis is laid on the mother-tongue and special attention is paid to the optional languages of Kannada, Sanskrit and Persian.

The course for the Intermediate Examination extends over a period of two years at the end of which there is a public examination. The Degree course in the Faculties of Arts and Science extends over a period of two years in the case of the B.A. and B.Sc. Degree Examinations and three years in the case of the B.A. (HONS.) and B.Sc. (HONS.) Degree Examinations. The M.A. and M.Sc. Degree courses extend over a year after the Honours. There is also a post-graduate course in Teaching extending over one academical year.

The Faculty of Medicine includes the L.M.P. Diploma course extending over a period of four years after S.S.L.C., and the M.B.B.S. Degree course extending over a period of five years and a half after Intermediate.

The Faculty of Engineering comprises the Diploma and Certificate courses in Engineering (extending over three years after S.S.L.C., in the case of the former) and the B.E. Degree course extending over four years of instruction in College after Intermediate followed by a year's practical training in works. In the case of the Degree course, the selection for the Civil, Mechanical, Electrical and Chemical Engineering branches of Engineering is made at the commencement of the second year course.

The University provides for the award of Post-Secondary Diplomas in vocational subjects.

There are University Unions in Bangalore and in Mysore which afford opportunities to the students, the members of the college staff, the members of the Senate and other University bodies and the registered graduates, for enjoying the best club-life and for coming into intimate social relations with one another. A special feature of these Unions is the organisation of a literacy campaign which is being conducted on systematic and vigorous lines.

The institution of the system of University Extension Lectures and of a Publication Bureau is evidence that the University is conscious that its activities should not be confined to the four walls of its colleges, but should extend to those who are not members of the University.

Compulsion in respect of physical education has now been introduced and a minimum attendance of 80 per cent of the classes is prescribed.

Provision is made for military training of University students.

For some years past, students of the University have been interesting themselves in social welfare work, which has been a feature of the activities of the University Unions at Mysore and Bangalore. With the institution of a University Settlement with headquarters for the time being in Bangalore, this work of the University students has now been placed on a proper footing.

The University has an Employment Bureau, which, it is hoped, will develop into a useful institution in due course.

UNIVERSITY SESSION

The academical year commences on the 1st June or on the following working day, if the 1st June is a Saturday or a holiday. The Constituent and the Intermediate Colleges close for the summer vacation on the 9th March.

MAHARAJA'S COLLEGE

COURSES OF INSTRUCTION

English, Kannada, Telugu, Tamil, Urdu, Persian, Arabic, Sanskrit, History, Philosophy, Sociology, Economics, Political Science, Psychology, Experimental Psychology, Statistics, Mathematics, Mathematical Economics and Statistics, Teaching.

Classes	Term begins	Term ends
Senior B.A. and B.Sc. and II and III Year B.Sc. (Hons.) classes ..	1st June	8th February
Junior B.A. and B.Sc. and I Year B.Sc. (Hons.) classes	„	18th February
Master's Degree classes	„	8th March
B.T. Degree class .. , ..	„	23rd or 24th January

CENTRAL COLLEGE

COURSES OF INSTRUCTION

English, Kannada, Telugu, Tamil, Urdu, Persian, Arabic, Sanskrit, German, Physics, Chemistry, Mathematics, Geology, Zoology, Botany.

Classes	Term begins	Term ends
Senior B.A. and B.Sc. and II and III Year B.Sc. (Hons.) classes ..	1st June	8th February
Junior B.A. and B.Sc. and I Year B.Sc. (Hons.) classes	„	18th February
Master's Degree classes ..	„	8th March

MAHARANI'S COLLEGE FOR WOMEN, BANGALORE

COURSES OF INSTRUCTION

English, Kannada, Sanskrit, Tamil, Urdu, Persian, Arabic, History, Logic, Economics, Sociology, Mathematics, Physics, Chemistry, Botany, Zoology, Geology.

Classes	Term begins	Term ends
Senior Intermediate, Senior B.A. and B.Sc. and II and III Year B.Sc. (Hons.) classes	1st June	8th February
Junior Intermediate, Junior B.A. and B.Sc. and I Year B.Sc. (Hons.) classes	"	18th February
Master's Degree classes	"	8th March

Note.—Women students for Degree courses in Science (Pass and Honours) are enrolled in the Maharani's College; instruction in science subjects is given in the Central College.

COLLEGE OF ENGINEERING

COURSES OF INSTRUCTION

Civil, Mechanical and Electrical Engineering

Classes	Term begins	Term ends
I, III and IV Year classes	1st June	8th February
II Year class	"	18th February

MEDICAL COLLEGE

COURSES OF INSTRUCTION

Physics, Bio-Chemistry, Organic Chemistry, Inorganic Chemistry, Zoology, Botany, Anatomy, Physiology, Materia Medica and Pharmacology, Pathology and Bacteriology, including Immunology, Hygiene, Medicine, Surgery, Midwifery and Gynaecology, Ophthalmology, Mental Diseases, Forensic Medicine, Vaccination, Epidemic Diseases, Tuberculosis, Venereal Diseases, Dental Surgery, Hospital Work.

Classes	Term begins	Term ends
Pre-Medical class	1st June	30th November
M.B.B.S. classes	9th January	30th November
Final M.B.B.S. class for failed students	9th January	20th June

INTERMEDIATE COLLEGE, MYSORE

Classes			Term begins	Term ends
Junior Intermediate	..	..	1st June	18th February
Senior Intermediate	..	..	„	8th February

INTERMEDIATE COLLEGE, BANGALORE

Classes			Term begins	Term ends
Junior Intermediate	..	..	1st June	18th February
Senior Intermediate	..	..	„	8th February

INTERMEDIATE COLLEGE, TUMKUR

Classes			Term begins	Term ends
Junior Intermediate	..	..	1st June	18th February
Senior Intermediate	..	..	„	8th February

INTERMEDIATE COLLEGE, SHIMOGA

Classes			Term begins	Term ends
Junior Intermediate	..	..	1st June	18th February
Senior Intermediate	..	..	„	8th February

MAHARANI'S INTERMEDIATE COLLEGE, MYSORE

Classes			Term begins	Term ends
Junior Intermediate	..	..	1st June	18th February
Senior Intermediate	..	..	„	8th February

MEDICAL SCHOOL

COURSES OF INSTRUCTION

Elements of Biology, Physics, Inorganic Chemistry, Anatomy, Physiology, Materia Medica and Pharmacology, Pathology and Bacteriology, Hygiene, Medicine, Surgery, Midwifery, Ophthalmology, Mental Diseases, Forensic Medicine, Vaccination, Oto-rhino-laryngology, Venereal Diseases, Infectious Diseases, Hospital Work.

Classes	Term begins	Term ends
I and II Year L.M.P.	1st June	End of February
III Year L.M.P.	"	"
IV Year L.M.P.	1st May	"
For those who pass in the September L.M.P. Examinations ..	1st October or after Dasara Holi- Days	31st August

SCHOOL OF ENGINEERING, BANGALORE

COURSES OF INSTRUCTION

Civil, Mechanical, Electrical and Automobile Engineering

Classes	Term begins	Term ends
I Year Diploma in Civil Engineering	1st June	20th January
" " Mechanical Engineering	"	"
" " Electrical Engineering	"	"
I Year Certificate in Mechanical Engineering	"	25th February
" " Electrical Engineering	"	"
II Year Diploma in Civil Engineering	"	20th January
" " Mechanical Engineering	"	"
" " Electrical Engineering	"	"
II Year Certificate in Mechanical Engineering	"	25th February
" " Electrical Engineering	"	"
III Year Diploma in Mechanical Engineering	"	20th January
" " Electrical Engineering	"	"
III Year Certificate in Mechanical Engineering	"	"
" " Electrical Engineering	"	"

CHAPTER I

LAWS OF THE UNIVERSITY OF MYSORE

PART I—ACT

ACT NO. III OF 1933

(Received the assent of His Highness the Maharaja on the sixth day of January 1933)

An Act to amend the Mysore University Act

WHEREAS it is expedient to amend and consolidate the provisions of the Mysore University Act V of 1916, as amended from time to time. It is hereby enacted as follows:—

Preamble.

1. This Act may be called the Mysore University Act, 1933.
Short title.

2. It shall come into force on the first day of July 1933.
Commencement.

3. In this Act unless there is anything repugnant in the subject or context—

Definitions. “Council” means the University Council.
“The Constituent Colleges” means the Maharaja’s College, the Central College, the Engineering College, the Medical College, the Maharani’s College for Women and such other colleges in Mysore or in Bangalore as may be declared by the Government from time to time to be constituent colleges.

An “Affiliated College” means a college admitted to the privileges of affiliation with the University under conditions prescribed in the Statutes and Ordinances.

“Registered Graduates” means graduates registered under this Act or under Act V of 1916, as amended from time to time.

“Statutes and Ordinances” means the Statutes and Ordinances of the University for the time being in force.

“University” means the University of Mysore.

“University Professor” means a professor in the University appointed as University Professor by the Government.

THE UNIVERSITY

4. (1) The persons who have been specified in this behalf by notification of the Government published in the official Gazette as the Vice-Chancellor and Members of the Senate and of the Council and all persons who may hereafter become or be appointed as Vice-Chancellor and Members of the Senate and of the Council and of the Academic Council as hereinafter constituted so long as they continue to hold such office or membership, shall be a body corporate by the name of the University of Mysore.

(2) The University shall have perpetual succession and a common seal and shall sue and be sued by the name first aforesaid.

(3) The University shall be deemed to be incorporated for the purposes, among others, of making provision for imparting education, literary, scientific, and artistic as well as agricultural, technical, commercial and professional, of furthering original research, of promoting the study of literature, science, art, philosophy, history, medicine and other branches of useful knowledge, and of imparting physical and moral training.

5. The University shall have power—

(a) to provide for instruction in such branches of learning as the University may decide and also for research and for the advancement and dissemination of knowledge;

(b) to affiliate colleges under conditions prescribed in the Statutes and Ordinances;

(c) to grant and confer degrees and other academic distinctions to and on persons who shall have pursued a prescribed course of study in the University and shall have passed the examinations held by the University;

(d) to grant diplomas, certificates or other distinctions to persons who have pursued a course of study under conditions approved by the University;

(e) to confer honorary degrees or other distinctions;

(f) to withdraw or cancel degrees, diplomas, certificates or other distinctions granted or conferred; and

(g) to do all such other acts and things as may be required in order to further the objects of the University as a teaching and examining body.

6. (1) The University shall be able and capable in law to take, purchase and hold any property, moveable or immoveable, which may become vested in it for the purpose of the University by purchase, grant, testamentary disposition or otherwise; and shall be able and capable in law to grant, demise, alien or otherwise dispose of all or any of the property,

Power to hold and to dispose of property.

Power to provide for instruction, to grant degrees, etc.

moveable or immoveable, belonging to the University; and also to do all other acts incidental or appertaining to a body corporate.

(2) All immoveable property transferred to the University by the Government either prior to the coming into force of this Act or subsequent thereto shall be under the direction, management and control of the University, and applied by it as trustee subject to the provisions and for the purposes of this Act.

THE CHANCELLOR

7. (1) His Highness the Maharaja of Mysore shall be the Chancellor and the highest controlling authority of the University.

Chancellor.

(2) The Chancellor may, at any time, direct an inspection of the University Institutions including buildings, laboratories and other appurtenances, generally and for the purpose of seeing that the proceedings of the University are in conformity with this Act, the Statutes and the Ordinances.

(3) The Chancellor may, by order in writing, annul any proceeding which is not, in his opinion, in conformity with this Act, the Statutes or the Ordinances.

Provided that before making any such order, he may call upon the University to show cause why such an order should not be made, and if any cause is shown within reasonable time may consider the same.

THE PRO-CHANCELLOR

8. The Chancellor may, at any time, appoint a Pro-Chancellor to exercise such powers and functions of the Chancellor as may be delegated to him by the Chancellor.

Pro-Chancellor.

The Pro-Chancellor shall, in all public functions connected with the University, take rank and precedence immediately after the Chancellor.

OFFICERS

9. The officers of the University shall include—

Officers of the University. (a) The Vice-Chancellor,
(b) the Registrar, and
(c) such other officers as may be provided for by the Statutes.

10. (1) The Vice-Chancellor shall be appointed by, and shall hold office during the pleasure of, the Chancellor.

Vice-Chancellor. (2) The Vice-Chancellor shall take rank in the University next to the Pro-Chancellor and shall be *ex-officio* Chairman of the Senate, of the Council and of the Academic Council and of any

committee appointed by the University of which he is a member. He shall be the principal executive officer of the Senate, of the Council and of the Academic Council. He shall, in the absence of the Chancellor and of the Pro-Chancellor, preside over the Convocation and confer degrees.

(3) It shall be the duty of the Vice-Chancellor to ensure that the provisions of this Act, the Statutes and the Ordinances are observed and carried out; and he may exercise all powers necessary for this purpose.

(4) The Vice-Chancellor may take action in any emergency which, in his opinion, calls for immediate action. He shall, in such a case, and as soon as may be thereafter, report his action to the authority which would ordinarily have dealt with the matter.

(5) The Vice-Chancellor shall perform such other functions and exercise such other powers as may be defined in the Statutes and in the Ordinances.

11. The Registrar shall be appointed by the Government on the recommendation of the Council. He shall be the custodian of the records and of the common seal of the University on behalf of the Council. He shall act as Secretary to the Senate, to the Council and to the Academic Council, and shall perform such other duties as may be prescribed by the Statutes or required, from time to time, by the Council or by the Vice-Chancellor.

AUTHORITIES

12. The authorities of the University shall include—

- (a) the Senate,
- (b) the Council,
- (c) the Academic Council,
- (d) the Faculties, and
- (e) such other authorities as may be provided for in the Statutes.

THE SENATE

13. (1) The Senate shall consist of—

CLASS I—*Ex-officio Members*

(a) The Vice-Chancellor and the other members of the Council mentioned in Section 14.

Constitution.

- (b) The Registrar.
- (c) The Deans of the Faculties.
- (d) The University Professors.
- (e) The Principals of affiliated and constituent colleges.

CLASS II—*Elected Members*

(f) Four members elected by the Academic Council from among its members.

(g) Six members elected by registered graduates from among themselves.

(h) Four members elected by and from the Legislative Council.

(i) Eight members elected by and from the Representative Assembly.

CLASS III—*Nominated Members*

(j) Other members nominated by the Chancellor so as to make up along with members in Classes I and II a total membership not exceeding seventy-five.

CLASS IV—*Additional Members*

(k) One representative of each of such Municipalities, District Boards and Associations as undertake to contribute a sum of not less than Rs. 2,000 per annum for a period of not less than five years to the University Fund for the general purposes of the University so long as the contributions continue to be paid.

(l) Every person who contributes to the University Fund for the general purposes of the University a sum of not less than ten thousand rupees or transfers property of the like value. Every such person shall be a life-member of the Senate.

(2) The election of members of the Senate coming under Class II and the appointment of additional members under Class IV shall be subject to the approval of the Chancellor.

(3) The Chancellor may, on the representation of the Senate, cancel the appointment of any person as a member of the Senate, and as soon as such order is notified in the official Gazette, the said person shall cease to be a member of the Senate.

(4) The Senate shall be reconstituted every three years.

(5) Except in such cases as are otherwise provided in the Statutes, a member of the Senate shall hold his seat until the next reconstitution of the Senate or of the body he represents thereon, whichever takes place earlier.

(6) The Senate may institute and confer such degrees and grant such diplomas, licenses, certificates and other distinctions under such conditions as may be prescribed by the Statutes and the Ordinances.

(7) The Senate shall, subject to the provisions of Sections 20 and 21, have power to make, amend or repeal Statutes, either of its own motion or on the motion of the Council and to consider or cancel Ordinances under conditions laid down by the Statutes.

(8) The Senate shall review the annual report and the annual accounts of the University which shall be placed before it by the Council and shall consider the Budget according to the provisions of the Statutes.

(9) The Senate shall have power to co-operate with other Universities and authorities.

(10) The Senate shall discharge such other functions as may be assigned to it by this Act and the Statutes.

THE COUNCIL

14. (1) The Executive Government of the University including the general superintendence and control over the institutions of the University, shall be vested in the Council, its function and powers.

Council: provided that the Government may, by rules framed in this behalf from time to time, reserve to themselves such powers relating to the appointment, punishment, removal and leave of the officers mentioned in Section 26 as they may deem fit.

(2) The Council shall consist of fifteen members and shall include—

- (a) the Vice-Chancellor,
(b) the Director of Public Instruction in Mysore,

(c) three members elected by the Senate from among its members who are not on the staff of constituent or affiliated colleges,

(d) two members elected by and from the Academic Council,

(e) four heads of constituent or affiliated colleges nominated by the Chancellor,

(f) four other members nominated by the Chancellor, of whom not more than one shall be employed on the staff of constituent or affiliated colleges.

(3) The Council shall be reconstituted every three years after the reconstitution of the Senate; it shall continue to function until it is reconstituted.

(4) The Council shall have power—

(a) to propose Statutes for the consideration of the Senate,

(b) to make Ordinances subject to the sanction of the Government provided that Ordinances relating to academic matters shall not be considered by the Council except on the initiative of the Academic Council and that after consideration of Academic Ordinances drafted and recommended by the Academic Council; the Council shall have power to assent to, withhold assent from, to reject or to remit for further consideration by the Academic Council such Academic Ordinances, but not to modify them, and

(c) to affiliate institutions within the State in accordance with the conditions prescribed in the Statutes and Ordinances.

(5) The Council shall hold, control and administer the property and funds of the University.

(6) The Council shall have the custody and shall direct the use of the common seal of the University.

(7) The Council shall have power to accept donations and transfers of any moveable or immoveable property on behalf of the University.

(8) The Council shall be responsible for the maintenance of discipline in the University.

(9) The Council shall exercise such other powers and perform such other functions as may be prescribed by this Act, the Statutes or the Ordinances.

THE ACADEMIC COUNCIL

15. (1) The Academic Council shall be the academic authority in the University and shall, subject to the provision of the Act, the Statutes and the Ordinances, be responsible for maintaining the standard of teaching and examination in the University.

(2) The Academic Council shall consist of—

The Vice-Chancellor.

The Director of Public Instruction in Mysore.

The Registrar.

The Principals of the constituent and affiliated colleges.

University Professors, Professors and such Assistant Professors as are in full charge of subjects in the constituent and affiliated colleges.

The Superintendents of Intermediate Colleges.

The University Librarian.

The Deans of Faculties.

Five members elected by and from the Senate.

Five members nominated by the Government.

(3) The Academic Council shall be reconstituted every three years after the reconstitution of the Senate; it shall continue to function until it is reconstituted.

(4) The Academic Council shall have power to propose Ordinances relating to academic matters for the consideration of the University Council and to make bye-laws regarding courses, examinations and other academic matters assigned to it by this Act, the Statutes and the Ordinances.

(5) It shall be a function of the Academic Council to promote research within the University.

THE FACULTIES

16. (1) The University shall include the Faculties of Arts, Science, Engineering and Technology, and Medicine and such other Faculties as may, from time to time, be constituted by the Statutes.

(2) The Faculties shall be constituted every three years from among the members of the Academic Council, each member of which body shall be assigned by it to one or more Faculties.

(3) In addition to the members of the Academic Council assigned to the Faculties, the Academic Council shall appoint three teachers to each Faculty; and the Faculty so constituted shall have power to co-opt not more than three persons as members of the Faculty on the ground of their expert knowledge of subjects coming within the purview of the Faculty.

(4) Each Faculty shall act generally in an advisory capacity to the Academic Council in academic matters falling within its purview.

(5) The Faculties shall perform such other functions as may be prescribed by this Act, the Statutes and the Ordinances.

(6) Each Faculty shall elect a Dean of that Faculty, who shall preside as Chairman at meetings of the Faculty and shall perform such other functions and duties as may be prescribed by this Act, the Statutes and the Ordinances.

THE UNIVERSITY INSTITUTIONS

17. Colleges, Schools and other Institutions for study and research other than affiliated colleges, shall be maintained by the University according to the provisions of the Statutes.

FINANCE AND CONTROL

18. (1) Subject to rules made by Government in this behalf, all grants made by the Government from time to time and all sums paid or endowments made by private persons or local authorities for the purposes of the University, together with all fees received and rents and profits and other income derived from the property and funds vested in the University, shall form a fund styled the University Fund which shall be at the disposal of the University to be employed for any of the purposes mentioned in this Act or in the Statutes or Ordinances.

(2) The University Fund shall be managed according to rules laid down in that behalf in the Statutes.

19. (1) The Government shall have power at any time to order an audit of the accounts of the University by such auditors as it may direct.

(2) If at any time the Government is of opinion that in any matter the affairs of the University are not managed in the furtherance of the objects and purposes of the University or in accordance with this Act and the Statutes and the Ordinances framed thereunder, or that special measures are desirable to maintain the standard of University teaching or examination, it may indicate to the Council any matter in regard to which it desires an explanation and call upon that body to offer such explanation as they desire to offer within such time as may be prescribed. If the Council fail to offer any explanation within the time prescribed or offer an explanation which, in the opinion of the Government, is unsatisfactory, the Government may issue such instructions as appear to it to be necessary and desirable in the circumstances of the case and may exercise such powers as may be necessary for giving effect to those instructions.

THE STATUTES

20. Subject to the provisions of this Act, the Statutes may provide for all or any of the following matters:—

(a) the powers and duties of the officers of the University other than the Chancellor and the Pro-Chancellor, in so far as these are not defined herein;

(b) the constitution, powers and duties of the authorities of the University in so far as these are not defined herein;

(c) the conditions of affiliation of colleges by the University;

(d) the procedure to be followed in the matter of the nomination, the election and the continuance in office of members of the University authorities and the filling up of vacancies among members, in so far as these matters are not prescribed herein and all other matters relating to these bodies which it may be necessary or desirable to provide;

(e) the degrees, diplomas, licenses, certificates and other academic distinctions to be awarded by the University;

(f) the withdrawal or cancellation of degrees, diplomas, licenses, certificates and other academic distinctions;

(g) the maintenance of a register of registered graduates;

(h) all such other subjects as are required or authorised by this Act to be prescribed by means of Statutes.

21. (1) All proposals by the Senate to make, amend or repeal Statutes shall be submitted to the Government with the opinion of the University Council which shall have been already submitted to the Senate. It shall be open to Government to

assent to, or withhold assent from, such proposals or to remit them for further consideration.

(2) No new Statute and no amendment or repeal of an existing Statute made by the Senate shall have effect until it is assented to by the Government.

22. The First Statutes shall be those attached as Schedule A to this Act.
First Statutes.

THE ORDINANCES

23. Subject to the provisions of this Act and the Statutes, the Ordinances may provide for any or all of the following, among other matters:—

- (a) the direction of academic matters relating to courses of study and examinations;
- (b) the discipline to be required of graduates and undergraduates;
- (c) conditions of admission to the various courses of study;
- (d) qualifying attendance required in the various courses;
- (e) membership of the University and the duties and privileges attached thereto;
- (f) the payment of fees to the University in relation to the enjoyment of privileges therefrom;
- (g) the number and designations of officers of the University, their powers and duties and the terms for which they shall hold offices in so far as these matters are not provided for in the Act and the Statutes;
- (h) the appointment and the prescription of the duties of Boards of Studies and Boards of Examiners;
- (i) all such other subjects as are required or authorised by the Act and the Statutes to be prescribed by means of Ordinances.

24. The procedure to be followed in making Ordinances and in amending or repealing existing Ordinances shall be according to provisions made in that behalf in the Statutes.
Procedure for making Ordinances.

MISCELLANEOUS

25. The Senate, the Council, the Academic Council and other bodies that may be constituted under this Act, the Statutes and the Ordinances, may make such subsidiary rules, and bye-laws not inconsistent with this Act, and the Statutes and the Ordinances in force as may be required to regulate the conduct of business entrusted to them severally.

26. Notwithstanding anything contained in this Act, all Professors, Assistant Professors and other officers and servants now employed in the colleges and other institutions maintained by the University and all such as may be employed hereafter for carrying on the work of the University shall, unless a reservation to the contrary is made at the time of their employment, be deemed to be officers holding appointments under the Government and shall in all respects be governed by the rules framed by the Government and in force for the time being in respect of such officers.

27. No act or proceeding of the Senate, the Council, the Academic Council or other body constituted under this Act or the Statutes or the Ordinances shall be deemed to be invalid merely by reason of any vacancy in the body doing or passing it at the time any such act or proceeding is done or passed.

TRANSITIONAL

28. The Ordinances of the University of Mysore in force at the time of the coming into operation of this Act shall, so far as they may be applicable, remain in force until they are replaced by Statutes and Ordinances to be framed under this Act.

29. In case of difficulty arising as to the first constitution or reconstitution of any authority of the University after the commencement of the operation of this Act or otherwise in first giving effect to its provisions, the Government may by order do anything which appears to it necessary for the purpose of removing such difficulty.

30. The Acts mentioned in Schedule B are hereby repealed.

Repeal of enactments.

SCHEDULE A

(See Section 22)

FIRST STATUTES

1. (a) The Vice-Chancellor shall have power to convene meetings of the Senate, the Council and the Academic Council and, when necessary, of any other University Body.

Vice-Chancellor; Power to convene meetings.

(b) The Vice-Chancellor shall convene a meeting of the Senate on the requisition of any fifteen members.

2. The quorum for meetings of the several University authorities shall be as follows:—

The Senate	25
The Council	7
The Academic Council ..	20
All other bodies ..	Half of the strength of such bodies.

3. The Registrar shall conduct the official correspondence of the Senate, the Council and the Academic Council. He shall

Registrar ; Powers and Duties. issue all notices convening meetings of the Senate, the Council, the Academic Council and the Faculties. He shall be empowered to sign agreements on behalf of the Council. He shall manage the property and investments of the University and the University Fund under the directions of the Council.

4. In addition to the constituent colleges, the University shall maintain the following teaching institutions, namely:—

University Institutions other than Constituent Colleges. the Intermediate College, Mysore; the Intermediate College, Bangalore; the *Intermediate College for Women, Bangalore; the Medical School, Bangalore; and such other teaching institutions as the Government in consultation with the University may, from time to time, direct to be maintained.

5. The University may confer the following degrees:—

Degrees.	Bachelor of Arts ..	(B.A.)	
	Bachelor of Science ..	(B.Sc.)	
	Bachelor of Commerce ..	(B.COM.)	
Bachelor of Engineering ..		(B.E.)	
Bachelor of Medicine and Surgery ..		(M.B.B.S.)	
Bachelor of Teaching ..		(B.T.)	
Master of Arts ..		(M.A.)	
Master of Science ..		(M.Sc.)	
	Doctor of Philosophy ..	(Ph.D.)	
	Doctor of Letters ..	(D.Litt.)	} Honoris causa
Honorary Degrees.	Doctor of Science ..	(D.Sc.)	
	Doctor of Laws ..	(LL.D.)	

6. Where at a meeting of the Academic Council not less than eight members recommended that an honorary degree be conferred on any person on the ground that he is, in their opinion, by reason of eminent position and attainments, a fit and proper person to receive such a degree and where their recommendation is supported by the Council and accepted by not less than two-thirds of the members present at a meeting of the Senate

* Now styled as Maharani's Intermediate College, Mysore.

Note.—There are two more Intermediate Colleges now—one at Tumkur and the other at Shimoga.

and is confirmed by the Chancellor, the Senate shall confer the honorary degree on such person; provided that in case of urgency the Chancellor may act on the recommendation of the Council only.

7. Where evidence is laid before the Council showing that any person on whom a degree, diploma, license, certificate or other distinction has been conferred or granted by the Senate, has been convicted of what in the opinion of the Council, is a serious offence involving moral delinquency and where at a meeting of the Council not less than eight members recommend to the Senate that the degree, diploma, license, certificate or other distinction be cancelled and where the recommendation is accepted by not less than two-thirds of the members present at a meeting of the Senate and is confirmed by the Chancellor, the degree, diploma, license, certificate or other distinction shall be cancelled accordingly.

8. The Council shall cause to be maintained proper accounts relating to the University Fund.

9. The Council shall arrange for the conduct of a detailed running audit by the Comptroller to the Government or by such other agency as may be determined by the Council of the accounts of the University including those of the institutions under it. It shall be competent to the University to make a contribution out of its funds towards the charges connected therewith.

10. The Council shall have prepared and laid before the Senate at a meeting to be held not later than the month of April in each year accounts of receipts and expenditure of the University for the previous year ending the 30th June together with an estimate of the income and expenditure of the University for the year to commence on the 1st July following.

11. The Senate shall consider and pass resolutions on the Budget estimates and shall communicate such resolutions to the Council. The Council shall take such action thereon as it thinks proper.

12. The budget estimates, after such consideration by the Senate and review by the Council, shall be submitted to the Government; and it shall be competent to the Government to sanction the budget estimates with such modifications, if any, as they may deem fit.

13. (i) Ordinances shall be of two kinds:—

- (a) Academic,
- (b) Administrative.

(ii) Ordinances dealing with academic matters such as courses of study, examinations and the promotion of research shall be deemed to be academic ordinances.

Procedure relating to making, amending and repealing.

(iii) Ordinances dealing with administrative matters such as elections, audits, inspections, fees, scholarships, free-studentships and such other matters as may be necessary for carrying on the administration shall be deemed to be administrative ordinances.

(iv) In the event of doubt arising as to the category in which an ordinance or a proposed ordinance should fall, the matter shall be decided in each such case by the ruling of the Vice-Chancellor.

14. (1) Proposals to make new academic ordinances or to amend or repeal existing academic ordinances shall originate with the Academic Council. Such proposals as may be accepted by the Academic Council shall be forwarded to the Council, which may assent to, or withhold assent from, such proposals or remit them for further consideration.

(2) The Council may, in case of urgency, dispose of academic matters which cannot wait. The Council shall, in such cases, report its action to the Academic Council, at its next meeting. It shall be open to the Academic Council to cancel such action, but without retrospective effect.

15. Proposals to make new administrative ordinances or to amend or repeal existing administrative ordinances shall originate with the Council. The Council may proceed to make and to bring into effect from such date as the Council may appoint any Ordinance, whether originating with the Council or with the Academic Council provided that before any Ordinance is brought into effect it shall be submitted to the Government and it shall be competent to the Government to disallow it or suspend its operation pending consideration by the Senate.

16. All Ordinances passed by the Council shall be submitted to the Senate at the next meeting of the Senate for consideration: provided that a member of the Senate may give notice of a proposition in the nature of an Ordinance, which may be referred by the Senate, with or without discussion, to the Council or to the Academic Council as the case may be, and the latter shall proceed with the proposition as in the case of a proposal initiated by itself.

17. All proposals relating to Ordinances forwarded by the Academic Council to the Council, whether approved by the latter or not, shall be submitted to the Senate at the next regular meeting of the Senate.

Administrative Ordinances.

Ordinances to be considered by the Senate.

Academic Ordinances to be submitted to the

18. The Senate may deal with Ordinances or proposals in respect of Ordinances submitted to it by the Council in any one of the following ways:—

Procedure of Senate
in regard to Ordinances.

(a) the Senate may assent;
(b) the Senate may cancel by a two-thirds majority of the members present at the meeting at the time of voting;

(c) the Senate may, by a two-thirds majority of the members present at the meeting at the time of voting, remit for further consideration, with or without suggestion for amendment;

(d) in the case of proposals affecting Ordinances emanating from the Academic Council and submitted by the Council in respect of which there is disagreement between the Academic Council and the Council, it shall be open to the Senate to assent or not to assent; but not to amend.

19. Ordinances which have received the assent of the Senate, or which have not been cancelled or remitted by it for further consideration shall be submitted to the Government who may sanction or reject or remit them for further consideration.

Assent of Govern-
ment to proposals relat-
ing to Ordinances
necessary.

20. Besides the duties assigned to it by this Act, the Council shall exercise the following functions:—

Council, duties of. (a) award stipends, scholarships, medals, prizes and other awards in conformity with the Ordinances and under the prescribed conditions;

(b) appoint the teachers of the University and fix their emoluments and conditions of service in accordance with rules made by the Government on this behalf;

(c) appoint the following, among other necessary Boards and Committees:—

Boards of Studies, Boards of Examiners, Students' Residence Committee, Extension Lectures Committee, Union Committees, University Library Committee and the like;

(d) order examinations in conformity with the Ordinances and appoint examiners after considering the recommendations of the Boards of Studies and the Academic Council;

(e) declare the results of the examinations and recommend for degrees, honours, diplomas, licenses, certificates and other marks of distinction;

(f) maintain a list of graduates.

21. The Academic Council—

Academic Council,
duties of. (a) shall make proposals for the organisation of courses of instruction of the University and shall be responsible for teaching work in the University and in general for purely academic questions;

(b) shall have control and general regulation of the standards of instruction, education and examination;

(c) shall make proposals for the conduct of University examinations and shall recommend to the Council the appointment of examiners;

(d) shall advise the Council in regard to students' fees for instruction and examination; and in regard to all subjects relating to teaching, examination and academic discipline;

(e) shall co-operate with other Universities or with Inter-University organisations in such work as is germane to the University.

22. (1) The Council shall maintain a register in which a graduate of any of the following classes may be entered:—

Registration of Graduates. (a) graduates who have taken the degree of Master of Arts or of Master of Science in the Mysore University;

(b) other Mysore University graduates who passed the Bachelor's Degree Examination not less than five years before the date of application; and

(c) Mysoreans by birth or domicile who, having passed a degree examination of a University other than the Mysore University before 1919, have since taken the degree.

(2) The fee for registration shall be Rs. 5 for life and shall be paid along with the application for registration. Graduates who were registered on or before 4th January 1930 shall not be required to make any further payment.

SCHEDULE B

(See Section 30)

Year	Number	Short title	Extent
1916	V	The Mysore University Act	The whole
1919	II	Act to amend the Mysore University Act, 1916	Do.
1923	XIV	Do.	Do.
1925	I	Do.	Do.
1927	III	Do.	Do.
1928	II	Do.	Do.

annual accounts and the audit report for the preceding academic year together with the financial estimates for the following year shall be presented.

(ii) The Senate may also meet at such other times as may be determined.

8. (i) The Vice-Chancellor may, whenever he thinks fit, convene a special meeting of the Senate.

(ii) The Vice-Chancellor shall convene a special meeting of the Senate on a written requisition signed by not less than twelve members of the Senate, accompanied by a copy of resolution or resolutions to be moved at the meeting together with the name of the proposer of each such resolution.

9. (i) Twenty-five members shall constitute a quorum for every meeting, ordinary or special, and all questions requiring decision shall, unless otherwise provided, be decided by a majority of the votes of the members present.

(ii) If at any time during the progress of a meeting, any member shall call attention to the number of members present, the Chairman shall, within a reasonable time, count the number of members present and, if a quorum be not present, he shall declare the meeting dissolved and shall leave the chair. The fact of such dissolution shall be recorded by the Registrar, and the record shall be signed by the Chairman.

10. Any member of the Senate shall be entitled to bring forward a resolution on a matter within the purview of the Senate.

The Chairman shall be the sole judge as to whether a subject falls within the purview of the Senate or not, and his decision thereon shall be final. Any such resolution, if carried, shall be forwarded to the Council, and the Council shall inform the Senate in due course, of the action taken.

11. Copies of proceedings of the Senate shall be submitted to Government by the University Council.

THE UNIVERSITY COUNCIL

12. Any member of the Council other than an *ex-officio* member, who shall have been absent from three consecutive ordinary monthly meetings shall be deemed to have vacated his seat except as provided in Statute 82.

Absence from three consecutive meetings of Council.

13. Vacancies of a permanent nature occurring between two consecutive reconstitutions by resignation, or by death, or under the preceding Statute or by reason of any disqualification arising under Statute 83, in the Council shall be filled, as soon as conveniently may be, by the authority which made the original appointments.

Vacancies.

14. A member of the Council who has vacated his seat shall be eligible for re-appointment.

Re-appointment.

15. (i) The Council shall meet ordinarily once a month and at other times when convened by the Vice-Chancellor. The Meetings of Council. Vice-Chancellor, or in his absence the senior member present, shall preside at meetings of the Council.

(ii) Seniority for the purpose of this Statute shall be according to the date of appointment to the Council ; and, in the case of members appointed on the same date, according to the order in which their names have been notified in the official Gazette. Seniority among members of Council.

(iii) The Council shall submit to Government without delay copies of its proceedings and orders, and copies of the proceedings of the Senate and of the Academic Council. Submission of proceedings to Government.

16. (i) Seven members shall constitute a quorum.

(ii) If at any time during the progress of a meeting any member shall call attention to the number of members present, the Chairman shall, within a reasonable time, count the number of members present, and, if a quorum be not present, he shall declare the meeting dissolved and shall leave the chair. The fact of such dissolution shall be recorded by the Registrar, and the record shall be signed by the Chairman. Quorum for Council meetings.

17. The Council shall, in addition to all other powers vested in it by the Act and subject to the provisions thereof, have and exercise the following powers and functions:— Powers and functions of the Council.

(i) to determine from time to time the number of Professors, Assistant Professors, Readers, Lecturers and other members of the staff that may be necessary for the University and its institutions;

(ii) to appoint the teachers of the University and fix their emoluments and conditions of service in accordance with rules made by Government in this behalf;

(iii) in the case of any appointment within its power of disposal, to delegate the power of filling the same, subject always to its general control, to such authority or authorities as the Council may, from time to time, by general or special resolution, direct;

(iv) to manage and regulate the finances, accounts, investments, property, business, and all other executive affairs of the University and for that purpose to appoint such agents as it may think fit;

(v) to cause to be maintained proper accounts relating to the University Fund ;

(vi) to invest any moneys belonging to the University, including any unapplied income, in such stocks, funds, shares or securities as the Council may from time to time think fit, or in the purchase of immoveable property in Mysore, and vary such investments from time to time ;

(vii) to provide buildings, premises, furniture and apparatus, and other requirements for carrying on the work of the University ;

(viii) to enter into, vary, carry out, and cancel contracts on behalf of the University ;

(ix) to entertain, adjudicate upon and dispose of grievances, if any, of the officers of the University, the teaching staff, graduates, undergraduates and University servants ;

(x) to maintain a register of donors to the University ;

(xi) to select a seal for the University, and provide for the custody and use of the same ;

(xii) to draft Ordinances as and when the Council deems necessary in accordance with the Act and these Statutes ;

(xiii) to refer any matter to the Academic Council, the Faculties, or Boards of Studies ;

(xiv) to decide what examinations of other Universities may be accepted as equivalent to those of this University ;

(xv) to establish or recognize hostels and lodges ;

(xvi) to arrange for and direct the inspection of hostels and of colleges and other University institutions ;

(xvii) to affiliate any college within the State after consultation with the Academic Council, to arrange for the periodical inspection of affiliated colleges, to withdraw or suspend for a definite period the affiliation granted to a college, after due enquiry and consultation with the Academic Council, provided that before consulting the Academic Council, the University Council shall inform the management of the college concerned of the findings of the enquiry and shall allow them an opportunity of making such representation as they may deem fit.

(xviii) to adjudge stipends, scholarships, medals, prizes and other awards in conformity with the Ordinances and under the prescribed conditions ;

(xix) to form such boards and committees as the Council thinks necessary, including the following, and appoint one of the members of each such board or committee, as the case may be, to be its chairman :—

Boards of Studies,
Boards of Examiners,
Students' Residence Committees,
Extension Lectures Committee,
Students' Information Bureau,

Union Committees,
University Library Committee,
Publication Committees;

the quorum for a meeting of each such board or committee being half its strength;

(xx) to institute examinations in conformity with the Ordinances, and to appoint examiners, after considering the recommendations, if any, of the Boards of Studies;

(xxi) to declare the results of examinations and make recommendations for degrees, honours, diplomas, licenses, certificates and other marks of distinction;

(xxii) to maintain a list of graduates;

(xxiii) to publish lists of prescribed or recommended text-books and courses of study;

(xxiv) to consider and make such reports or recommend such action as may be deemed necessary on proposals or motions brought forward by the members of the Senate or the Academic Council, for consideration by the Senate or the Academic Council as the case may be;

(xxv) to prepare such forms and registers as are, from time to time, prescribed by the Ordinances, or as may be deemed by the Council to be necessary;

(xxvi) subject to the provisions of any laws or orders of Government in this behalf, to appoint, fine, suspend, or dismiss any servant of the University;

(xxvii) to take cognizance of any misconduct by any student of the University or by any candidate for any University examination or for a degree, diploma, license, title or mark of honour, brought to the notice of the Council by the head of the University institution concerned or by a member of any one of the University authorities or by the Registrar of the University or by a Chairman of a Board of Examiners or by a Chief Superintendent at any centre of examination, and to punish such misconduct at any time by expulsion from the University or the University institution concerned or by exclusion from any University examination or from any Convocation for the purpose of conferring degrees, either permanently or for a specified period, or by cancelling any University examination or by deprivation of any University scholarship or endowment held by the person guilty of such misconduct.

18. The Council may, in case of urgency, dispose of academic matters which cannot be delayed. The Council shall, in such cases, report its action to the Academic Council at its next meeting. It shall be open to the Academic Council to cancel such decision, but without retrospective effect.

Powers to dispose
of urgent academic
matters.

THE ACADEMIC COUNCIL

19. Any member of the Academic Council other than an *ex-officio* member who shall have been absent from three consecutive meetings of the Academic Council shall be deemed to have vacated his seat except as provided in Statute 82.

Absence from three consecutive meetings.

20. Vacancies of a permanent nature occurring between two consecutive reconstitutions by resignation, or by death, or under the preceding Statute or by reason of any disqualification arising under Statute 83, in the Academic Council, shall be filled up as soon as conveniently may be, by the authority which made the original appointments.

Vacancies.

21. A member of the Academic Council who has vacated his seat shall be eligible for re-appointment.

Re-appointment.

22. When a person ceases to be a member of the Academic Council, he shall cease to be a member of every University authority of which he may be a member by virtue of his membership of the Academic Council.

Tenure of office of a member of Academic Council on other bodies.

23. (i) The Academic Council shall meet twice a year, *viz.*, in July and in December, on dates to be fixed by the Vice-Chancellor, and at other times when convened by the Vice-Chancellor.

Ordinary meetings of Academic Council.

(ii) The Vice-Chancellor shall convene a meeting of the Academic Council on a written requisition signed by not less than fifteen members of the Academic Council, accompanied by a copy of the resolution or resolutions to be moved at the meeting together with the name of the proposer of each such resolution.

Other meetings on requisition.

24. Copies of the proceedings of the Academic Council shall be submitted to Government without delay.

25. (i) Twenty members shall constitute a quorum, and all questions requiring decision shall, unless otherwise provided, be decided by a majority of the votes of the members present.

Quorum for a meeting.

(ii) If at any time during the progress of a meeting any member shall call attention to the number of members present, the Chairman shall, within a reasonable time, count the number of the members present, and, if a quorum be not present, he shall declare the meeting dissolved and shall leave the chair. The fact of such dissolution shall be recorded by the Registrar and the record shall be signed by the Chairman.

26. The Academic Council shall, in addition to all other powers vested in it by the Act and subject to the provisions thereof, have and exercise the following Powers and functions. powers and functions:—

(i) to constitute Faculties in accordance with the Act and the Statutes;

(ii) to advise the University Council on all academic matters;

(iii) to have control and general regulation of the standards of instruction and examination;

(iv) to make bye-laws relating to courses of studies and schemes of examinations;

(v) to make proposals to the University Council for the conduct of University examinations;

(vi) to make recommendations to the University Council regarding conditions of admission to the University;

(vii) to advise the University Council regarding the affiliation of any college and the suspension or the withdrawal of the affiliation granted to a college;

(viii) to advise the University Council as to what examinations may be accepted as equivalent to those of the University of Mysore;

(ix) to advise the University Council in regard to students' fees for instruction and examination and in regard to all subjects relating to teaching and examinations;

(x) to make proposals for the organisation of courses of instruction and be responsible for teaching work in the University and in general for all purely academic matters;

(xi) to advise the University Council in regard to the conditions of award for endowed fellowships, scholarships, medals and prizes subject to fulfilment of the expressed wishes of the donors;

(xii) to refer any matter within its purview to the Faculties and Boards of Studies;

(xiii) to make recommendations to the University Council regarding the management and use of the University Library;

(xiv) to co-operate with other Universities and with Inter-University organisations in such work as may be germane to the University.

27. The Academic Council shall, at its first meeting, appoint a Standing Committee consisting of the Vice-Chancellor as Chair-

man and six other members to be elected from among its own members. Four members of such Standing Committee shall form a quorum. The Standing Committee shall perform such functions as may be delegated to it from time to time by the Academic Council.

THE FACULTIES

28. The constitution of Faculties, including the assignment of members of the Academic Council and the appointment of teachers to Faculties, shall be made at the first meeting of the Academic Council after its constitution; and, in the case of a member appointed to the Academic Council at a subsequent date, the assignment to a Faculty shall be made at the meeting next after his becoming a member.

Constitution of
Faculties.

29. Each Faculty shall continue to function until it is re-constituted.

Tenure of office.

30. The election of the Dean of a Faculty under clause 19 (6) of the Act shall be by ballot and shall be held at the first meeting of the Faculty after its constitution, provided that no member shall be declared elected, unless he obtains not less than 50 per cent. of the votes recorded at the ballot. The Dean of a Faculty, so long as he is a member of such Faculty, shall hold office until the election of his successor.

31. The meetings of each Faculty shall be convened by the Dean or, in his absence, by the Registrar. In the absence of the Dean from a meeting of a Faculty, the members thereof present shall elect one of their number to preside at the meeting.

Meetings of a
Faculty.

32. The quorum for a meeting of a Faculty shall be one half of the number of members of the Faculty.

Quorum for a meeting.

33. It shall be competent for the University Council or the Academic Council to refer any matter for consideration to a joint meeting of two or more Faculties. Such joint meeting shall be convened by the Registrar. The quorum therefor shall be one half of the total strength of the said Faculties, no one member, however, counting more than once. One of the Deans and, in the absence of all of them, one of the members present, shall be elected to preside at the joint meeting.

Joint meeting of
Faculties.

34. A Faculty shall have power—

(i) to consider and report on any matter referred to it by the Senate, the University Council or the Academic Council;

(ii) to draft rules in regard to courses of study and examinations prescribed by the University and to lay such rules before the Academic Council;

(iii) to remit any matter to a Board of Studies related to the Faculty for consideration and report;

(iv) to consider any report or recommendation received from a Board of Studies;

Powers of Faculties.

(v) to hold meetings of the Faculty or of a committee of the Faculty jointly with any other Faculty or a committee thereof, for the discussion of any matter of common interest.

35. Any member of a Faculty may bring before a meeting of the Faculty any matter within its purview by giving not less

than three days' previous notice to the Dean.
 Notice of propositions by members.

FINANCE

36. The University Council shall cause to be maintained proper accounts relating to the University Fund.
 Accounts of University Fund.

37. The Council shall arrange for the conduct of a detailed running audit, by the Comptroller to the Government or by such other agency as may be determined by the Council with the approval of Government, of the accounts of the University including those of the institutions under it. It shall be competent to the University to make a contribution out of its funds towards the charges connected therewith.

38. The accounts of receipts and expenditure of each year ending 30th June shall, as soon as possible after they are audited, be published in the official Gazette together with a statement of cash assets and liabilities and a statement of endowments and investments. Copies thereof shall, together with copies of the audit report, be placed before the Senate and submitted to Government.
 Publication of accounts.

39. The Council shall cause to be prepared and laid before the Senate at a meeting to be held not later than the month of April in each year an estimate of the income and expenditure of the University for the year to commence on the 1st July following after such estimates shall have been placed before and scrutinized by the Committee of Finance.
 Preparation of budget estimates.

40. The Senate shall consider the budget estimates, and shall communicate such resolutions as it may pass thereon to the Council. The Council shall take such action on the resolutions of the Senate as it may deem necessary, provided that, where the Council does not give effect to any such resolution, reason shall be briefly recorded.
 Consideration of budget estimates by Senate.

41. The budget estimates, after consideration by the Senate and such revision, if any, by the Council as may be deemed necessary, shall be submitted to Government; and it shall be competent to Government to sanction the budget estimates with such modifications, if any, as they may deem fit.
 Sanction of budget estimates by Government.

COMMITTEE OF FINANCE

42. The University Council shall, at its first meeting after reconstitution, appoint a Committee of Finance hereby declared to be an authority of the University under Constitution. Section 12 of the Act and consisting of the Vice-Chancellor as Chairman, three members of the Senate who shall not be members of the Council, two members of the Council (in addition to the Vice-Chancellor) and one financial expert. The Registrar shall act as Secretary to the Committee. Four members of the Committee shall form a quorum. Casual vacancies on the Committee shall be filled up by the Council.

43. The Committee of Finance shall have and exercise the following functions:—

- Powers.
- (i) to examine the annual budget estimates and advise the Council thereon;
 - (ii) to conduct a general examination of the accounts of the University and review the audit objections and replies thereon;
 - (iii) to make recommendations to the Council on all matters relating to the finances of the University;
 - (iv) to examine every proposal for new expenditure involving a sum exceeding Rs. 5,000 and advise the Council thereon;
 - (v) to review the financial position periodically; and
 - (vi) generally to devise means for the improvement of the financial position of the University.

VICE-CHANCELLOR

44. The Vice-Chancellor shall exercise general supervision over the educational arrangements of the University, regulate the admission of students, and maintain the discipline of the University, for which he shall be responsible to the University Council.

45. The Vice-Chancellor shall have power to convene meetings of the Senate, the University Council and the Academic Council and, when necessary, of any other University body.

Power to convene meetings.

46. The Vice-Chancellor may, in matters which are not provided for in the Act, the Statutes or the Ordinances, and in which he considers a reference to Government is necessary, make a reference thereon to Government.

Power to make reference to Government.

47. In any matter connected with the management, administration and development of the University, the Vice-Chancellor may take the necessary initiative.

Power of initiative.

THE REGISTRAR

48. The Registrar shall conduct the official correspondence of the Senate, the University Council and the Academic Council.

Registrar's powers and duties. He shall issue all notices convening meetings of the Senate, the University Council and the Academic Council. He is empowered to sign agreements on behalf of the University Council. He shall manage the property and investments of the University and the University Fund, under the directions of the Council. He shall act as Secretary to the Students' Information Bureau and shall perform such other duties as may, from time to time, be prescribed by the Council, and render such assistance as may be desired by the Vice-Chancellor in the performance of his official duties.

49. The Registrar shall ordinarily hold office for a period of three years in the first instance, but the same person shall be eligible for re-appointment.

Tenure of appointment of Registrar.

50. The scale of the establishment for the offices of the University shall be fixed by the University Council from time to time.

Scale of University Office.

COMMITTEES

51. The University Council may, from time to time, appoint committees consisting of members of the Senate and also, if the Council thinks fit, of persons who are not members of the Senate and may delegate to such committees such duties as it thinks fit as regards administrative or other matters affecting the University or any particular Faculty or department, the management or supervision of any buildings or other property of the University, and the like.

52. The Senate, the Academic Council, the Faculties and the Boards of Studies may likewise appoint committees to deal with, and report on any matter that falls within their respective spheres.

Senate may appoint committees.

ORDINANCES

53. (i) Ordinances shall be of two kinds:—

Ordinances: two kinds. (a) Academic,
(b) Administrative.

(ii) Ordinances dealing with academic matters, such as courses of study, examinations and the promotion of research, shall be deemed to be Academic Ordinances.

(iii) Ordinances dealing with administrative matters, such as elections, audits, inspections, fees, scholarships, free-student-ships and such other matters as may be necessary for carrying on the administration of the University, shall be deemed to be Administrative Ordinances.

(iv) In the event of doubt arising as to the category in which an Ordinance or a proposed Ordinance should fall, the matter shall be decided by the ruling of the Vice-Chancellor.

Decision in case of doubt.

54. Proposals to make new Academic Ordinances or to amend or repeal existing Academic Ordinances shall originate with the Academic Council, which may act on its own motion or on a reference from the Senate or the University Council or other University authority. Such proposals as may be accepted by the Academic Council shall be forwarded to the University Council which may assent to, or withhold assent from, such proposals or remit the same for further consideration.

55. All proposals relating to Ordinances forwarded by the Academic Council to the University Council, whether approved by the latter or not, shall be referred to the Senate at the next regular meeting of the Senate.

Proposals for Academic Ordinances to be placed before Senate.

56. Proposals to make new Administrative Ordinances or to amend or repeal existing Administrative Ordinances shall originate with the University Council, which may act on its own initiative or on a reference from the Senate or other University authority. The University Council may proceed to make and to bring into effect from such date as it may appoint any Ordinance, whether originating with the University Council or with the Academic Council: provided that, before any Ordinance is brought into effect, it shall be submitted to the Government, and it shall be competent to the Government to disallow it or suspend its operation pending consideration by the Senate.

57. All Ordinances passed by the University Council shall be referred to the Senate at the next meeting of the Senate for consideration: provided that a member of the Senate may give notice of a proposition in the nature of an Ordinance, which may be referred by the Senate, with or without discussion, to the University Council or to the Academic Council, as the case may be, and the latter shall proceed with the proposition as in the case of a proposal coming under Statute 54 or 56 as the case may be.

Ordinances passed by University Council to be placed before Senate.

58. The Senate may deal with Ordinances or proposals in respect of Ordinances referred to it by the University Council in any one of the following ways:—

Procedure of Senate
in regard to Ordinances.

(a) the Senate may assent;

(b) the Senate may cancel by a two-thirds majority of the members present at the meeting at the time of voting;

(c) the Senate may, by a three-fifths majority of the members present at the meeting at the time of voting, remit for further consideration, with or without suggestion for amendment;

(d) in the case of proposals affecting Ordinances emanating from the Academic Council and referred by the University Council, in respect of which there is disagreement between the Academic Council and the University Council, it shall be open to the Senate to assent or not to assent, but not to amend.

59. Every Ordinance which has received the assent of the Senate or which has not been cancelled or remitted by it for further consideration shall be submitted to the Government who may sanction or reject the same or remit it for further consideration.

Ordinances not cancelled or remitted for further consideration to be submitted to Government.

GENERAL PROVISIONS RELATING TO ELECTIONS

60. (i) Except as otherwise provided in the Act, Statutes or Ordinances, the Vice-Chancellor shall be responsible for the conduct of all elections, and shall have power to fix the dates of elections. Unless specifically provided otherwise, the decision of the Vice-Chancellor on any question relating to such elections shall be final.

Vice-Chancellor responsible for conduct of elections.

(ii) If any dispute arises as to whether any person has been duly elected or nominated as, or is entitled to be, a member of any authority or body of the University, the Vice-Chancellor shall refer the question to the Chancellor with a report expressing his own view on the question. The decision of the Chancellor on such reference shall be final.

Reference to Chancellor in case of dispute.

61. The Vice-Chancellor shall have power to hold or cause to be held elections in anticipation of vacancies that are about to occur owing to efflux of time.

Election in anticipation of vacancies.

62. No election to an authority of the University shall be invalid by reason of any vacancy among the number of persons entitled to vote at such election, or in the case of a postal vote, on account of the loss in the post of any notice or voting paper.

Existence of vacancy or loss of papers in post not to invalidate election.

63. The results of all elections shall be notified in the official Gazette, and shall have effect from the date fixed in such notification.

Notification of results of election.

64. In the case of elections by registered graduates, all graduates who are entered on the register of graduates at the time of the issue of nomination papers shall be entitled to vote or to be elected (as the case may be) at such elections and shall be the only persons so entitled.

Eligibility of registered graduates to vote or to be elected.

65. When a member of a University authority has to be elected by the Legislative Council or the Representative Assembly, the Registrar shall request the Secretary to the Legislative Council or the Representative Assembly as the case may be, or any other officer deputed by the Government in this behalf, to arrange for such election. Subject to the provisions of the Act, the election shall be conducted in such manner as such Secretary or other officer as aforesaid may determine.

Election by Legislative Council or Representative Assembly.

66. The election of members to the University Council by the Senate or by the Academic Council shall be held at a meeting of the Senate or Academic Council in accordance with the rules of business of the Senate or Academic Council: provided that no member shall be declared elected, unless he obtains not less than fifty per cent of the votes actually recorded at the ballot. Other elections shall be held at a meeting or by correspondence as may be decided by the Vice-Chancellor.

Elections at a meeting.

UNIVERSITY INSTITUTIONS

67. In addition to the Constituent Colleges, the University of Mysore shall maintain the following teaching institutions, namely:—

Teaching institutions other than Constituent Colleges.

- (i) The Intermediate College, Mysore;
- (ii) The Intermediate College, Bangalore;
- (iii) The Maharani's Intermediate College, Mysore;

- (iv) The Intermediate College, Tumkur;
- (v) The Intermediate College, Shimoga;
- (vi) The Medical School, Bangalore;
- (vii) The School of Engineering, Bangalore;

and such other teaching institutions as the University may, from time to time, decide to conduct with the sanction of Government.

AFFILIATION OF COLLEGES

67 A. Colleges may be affiliated under the following conditions:—

Every affiliated college shall be managed by a regularly constituted managing body on which the teaching staff shall be represented at least by the Principal.

Constitution of
Managing Body of a
College.

Any change in the constitution of the managing body shall be reported forthwith to the University Council.

Change in the
Managing Body.

Every affiliated college shall have a duly constituted college council properly representative of the teaching staff, to advise the Principal in the internal affairs of the college relating to admission, promotion and award of scholarships and free-studentships.

College Council.

Every affiliated college shall satisfy the University Council that adequate financial provision is available for its continued and efficient maintenance, either in the form of an endowment or by an undertaking given by the person or body maintaining it and that the rules regarding the fee to be paid by its students have not been so fixed as to involve competition with a constituent college.

Financial provision of
a College.

Every affiliated college shall satisfy the University Council on the following other points:—

(1) The suitability and adequacy of its accommodation and equipment for teaching;

(2) The character, qualification, and adequacy of its teaching staff and the conditions of their service;

(3) the residence, physical welfare, discipline and supervision of its students; and

(4) such other matters as are essential for the maintenance of the tone and standards of University education.

In regard to matters referred to above, the University Council shall be guided by the reports of inspections and by any rules which may be prescribed.

Every college shall furnish such returns and other information as the Council may require to enable it to judge of its efficiency and shall take such action as the University Council may consider necessary to maintain its efficiency.

Returns from colleges.

Appointments to the teaching staff of a college shall be made only after the Principal has been given an opportunity of expressing his views.

Teaching staff ap-
pointments.

All appointments shall be reported to the University Council which shall satisfy itself that they meet the requirements of the University.

Every college shall make adequate arrangements for the physical training of its students and their medical examination.

Facilities for physical culture and games.

Every college shall have attached to it a medical officer of the qualifications prescribed by the University Council in order to conduct the medical examination of the students of the college.

Medical examination of students.

Every college shall be subject to inspection from time to time by one or more persons appointed by the University Council in this behalf.

Inspection of colleges.

Every college inspected in respect of which an enquiry has been made by the University Council shall take within such period as may be fixed, such action as the

Action to be taken by colleges on reports after inspection.

University Council may specify.

It shall be open to a college to suspend, after previous intimation to the University Council, instruction in any subject or course of study in which the college is affiliated for a total period not exceeding three consecutive academical years. At the end of the period of suspension, work may be resumed with the previous approval of the University Council. If the work is not resumed at the end of the period of suspension, the affiliation previously granted shall be regarded as having lapsed, provided that, when in any year a college, being prepared to make the usual arrangements to give instruction in the subjects in which it has been affiliated does not, for want of students, open classes, in one of those subjects, and it reports to the University Council before the 1st of August, it shall not be deemed that the college has suspended instruction in that subject; provided also that, notwithstanding anything contained in the foregoing proviso, it shall be competent for the University Council to consider the need for the continuance of affiliation of the college in a subject which has not been taught for three consecutive years.

Temporary suspension of instruction in courses.

The following registers and records shall be maintained by each college in the form that may be prescribed by the University Council; and in every case in which a school forms a part of the institution, they shall be maintained distinct from those kept for the school department:—

- (a) A register of admissions and withdrawals.
- (b) A register of attendance.
- (c) A register of attendance at physical training.

- (d) A register of other record of addresses of students.
- (e) A register of the members of the staff, showing their qualifications, previous experience, salary, number of hours of work and classes and the subjects taught.
- (f) A register of fees paid showing dates of payments.
- (g) A counterfoil fee receipt book.
- (h) A register of scholarships and concessions of all kinds, whether tuition, boarding or lodging.
- (i) A counterfoil book of transfer certificates.
- (j) A counterfoil book of certificates of medical examination of students.
- (k) A register of marks obtained by each student at the college examinations.
- (l) Account books showing the financial transactions of the college as separate from those of the management.

The procedure to be followed in regard to affiliation and other details not specified in the foregoing Statute shall be provided in the Ordinances.

DEGREES

68. The University may confer the following degrees:—

Degrees that may be conferred.

Bachelor of Arts	..	B.A.	
„ Science	..	B.Sc.	
„ Commerce	..	B.COM.	
„ Engineering	..	B.E.	
„ Medicine and Surgery	..	M.B.B.S.	
„ Teaching	..	B.T.	
Master of Arts	..	M.A.	
„ Science	..	M.Sc.	
Doctor of Philosophy	..	PH.D.	
„ Letters	..	D.LITT	} Honoris Causa
„ Science	..	D.Sc.	
„ Laws	..	LL.D.	

HONORARY DEGREES

69. The Senate may, on the concurrent recommendation of the University Council and the Academic Council, if accepted by not less than two-thirds of the members

present at a meeting of the Senate, confer an honorary degree upon a person on the ground that he is, by reason of eminent position, and attainments, or by virtue of his contribution to

Procedure for conferment of honorary degrees.

learning or eminent services to the cause of education, a fit and proper person to receive such a degree: provided that every proposal for the conferment of an honorary degree shall be subject to the confirmation of the Chancellor, and provided further that, in a case of urgency, the Chancellor may act on the recommendation of the University Council only.

70. Honorary degrees shall be conferred only at a Convocation and may be received in person or
How taken. *in absentia.*

71. The presentation at the Convocation of persons on whom honorary degrees are to be conferred shall be made by the Vice-Chancellor or in his absence by a member
Presentation of candidates. of the Senate nominated by the Council.

72. The diploma or certificate for an honorary degree shall be signed by the Chancellor.
Diplomas.

72 A. The University may grant the following post-secondary diplomas to persons who have pursued a course of study under conditions prescribed in the Ordinances.

Diploma in Medical Practice	L.M.P.
„ Agriculture ..	.. L.AG.
„ Sericulture ..	.. L.S.
„ Veterinary Science ..	.. L.V.Sc.
„ Engineering (Civil) ..	.. L.E. (Civil)
„ „ (Mechanical)	.. L.E. (Mech.)
„ „ (Electrical)	.. L.E. (Elec.)
„ „ (Automobile)	.. L.E. (Auto.)
„ Teaching ..	.. L.ED.
„ Commerce ..	.. L.COM.
„ Prints and Engraving	L.P.E.
„ Printing and Binding	L.P.B.
„ Pharmacy ..	.. L.PH.
„ Music ..	.. L.MUS.
„ Home Science ..	.. L.H.SC.
„ Painting and Drawing	L.P.D.

CANCELLATION OF DEGREES

73. Where evidence is laid before the Council showing that any person on whom a degree, diploma, license, certificate or other distinction has been conferred or granted by the Senate, has been convicted of what in the opinion of the University Council is a serious offence involving moral delinquency, and where the University Council at a meeting recommends to the Senate

Procedure for cancellation of degrees.

that the degree, diploma, license, certificate or other distinction be cancelled, and where such recommendation is accepted by not less than two-thirds of the members present at a meeting of the Senate and is confirmed by the Chancellor, the degree, diploma, license, certificate or other distinction shall be cancelled accordingly.

REGISTRATION OF GRADUATES

74. The Council shall maintain a register in which a graduate of any of the following classes may be entered:—

Eligibility for registration. (i) Graduates who have taken the degree of Master of Arts or Master of Science in the University of Mysore.

(ii) Other graduates of this University who, having passed the Bachelor's Degree examination not less than five years before the date of application, have also taken the degree.

(iii) Mysoreans by birth or domicile who, having passed a degree examination of a University other than the University of Mysore prior to 1919 in Arts or Science, prior to 1921 in Engineering, and prior to 1929 in Medicine, have also taken the degree.

75. The fee for registration shall be five rupees for life and shall be paid along with the application for registration.

76. The register of graduates shall be revised and corrected on the first day of January of each year. Applications for revision or correction shall reach the Registrar not later than the fifteenth day of December preceding.

Revision of register of graduates.

77. Any graduate may inspect the register of graduates during office hours on application to Registrar and may obtain a copy of a complete list of registered graduates on payment of two rupees.

Inspection of register.

CONVOCATION

78. A Convocation for the purpose of conferring degrees shall be held annually at Mysore, and special Convocations for the same at other times, and on such date or dates as the Chancellor may direct.

Convocation, annual and special.

79. The University Council shall frame rules of procedure at Convocations.

Council to frame rules of procedure for Convocation.

GENERAL

80. (i) Any notice of information or intimation required to be given, and any paper, minutes or proceedings required to be sent to any person by the laws of the University shall, unless otherwise provided, be given or sent by messenger or post to the address of that person as registered in the University Office.

Addresses to which notices, etc., may be sent.

(ii) Every officer of the University and every member of a University authority or body appointed under the laws of the University shall, if required by the Registrar, give an address to which communications may be sent; and the posting of communications to that address shall be a sufficient compliance with requirements of the law as to notice or despatch of papers.

Officers and members to furnish address.

81. Where by any provision of law or of the Statutes or Ordinances, any act or proceeding is directed or allowed to be done or taken in the office of the Registrar on a certain day or within a prescribed period, and the office is closed on that day or the last day of the prescribed period, the act or proceeding shall be considered as done or taken in due time if it is done or taken on the day on which the office re-opens.

Where holiday intervenes, business may be done on next working day.

82. If any person nominated to an authority or a body of the University intends to go on leave or be absent from India for a period exceeding three months, he shall, if he desires to resume his membership on his return, give due notice of his intention to the University. In such case his membership shall cease temporarily during such absence, the vacancy being temporarily filled by nomination under the Act.

Cessation of membership.

83. No person shall be qualified for membership of any authority or body of the University, if he is of unsound mind, or deaf-mute, or suffers from contagious leprosy, or is an uncertificated bankrupt or undischarged insolvent or has been convicted of what in the opinion of the University Council is a serious offence involving moral delinquency.

Disqualification for membership of University authorities.

The University Council shall determine whether a person is disqualified and its decision shall be final.

REGISTER OF DONORS

84. The University Council shall maintain a register showing the name and address of every person or association making a donation for the general purposes of the University under Section 13—(1) (j) and (k) of the Act.

PART III—ORDINANCES

A. Administrative Ordinances

PROVISIONS RELATING TO ELECTIONS

1. The Registrar of the University shall be the Returning Officer for all elections conducted by the University and shall, subject to the provisions of the Act, Statutes and Ordinances, do all things necessary for the conduct of elections.

2. The voting papers, together with the declaration papers, if any, of all the elections shall be preserved in the University Office for a month after the results are duly notified.

3. If any vacancy occurs, or is about to occur by efflux of time, among the members of any University authority, which has to be filled up by the election conducted by the University, the Registrar, under the direction of the Vice-Chancellor, shall notify the electors of the fact and also simultaneously cause a notification of the fact to be published in the official Gazette.

4. Every elector shall be at liberty to nominate a qualified person to fill the vacancy. Every nomination shall be made by an elector in writing, and shall be seconded in writing by another elector. Every such nomination shall be accompanied by the consent in writing of the nominee agreeing to serve on the University authority if elected, and must reach the Registrar not later than ten days after the publication of the notification in the Gazette.

Provided that no candidate for election to the Senate shall stand for election at the same time from more than one constituency.

5. If the number of nominees does not exceed the number of vacancies to be filled, the Registrar shall declare such nominees to be elected.

5 A. If the number of nominees exceeds the number of vacancies to be filled, the Registrar shall forward to each candidate nominated a complete list of nominees. It will be competent for any candidate nominated to withdraw his candidature by intimation in writing to the Registrar, which should reach him not later than five clear days after the date of the issue of the list.

6. If the number of nominees still continuing exceeds the number of vacancies to be filled, the Registrar shall arrange to conduct the elections as detailed below:—

Procedure for election.

(i) The Registrar shall forward to each elector a declaration paper and a voting paper, which shall bear on it the date of posting, together with a notice stating the number of vacancies, the date fixed for the poll, the hour of the closing of the ballot and the day and hour of the scrutiny and counting of votes. The dates fixed for the poll shall be not less than ten days from the date of posting of the voting papers, to the electors.

Despatch of declaration and voting papers

(ii) The declaration paper and the voting paper shall be filled up and returned to the Registrar, in accordance with the directions given thereon to secure the secrecy of the ballot, and so as to reach him not later than the day and the hour notified for the closing of the ballot.

Return of voting and declaration papers.

(iii) The Registrar shall deposit all the covers containing the declaration and voting papers in a safe in his office, until the time fixed for opening them and for scrutinising and counting the votes.

Safe custody of voting papers.

(iv) The Council shall appoint two members of the Senate to act with the Registrar in the scrutiny and counting of the votes.

Appointment of tellers.

(v) On the day and at the time appointed for the scrutiny and counting of votes, the Registrar shall arrange the covers received and open them in the presence of the said members and scrutinise the declaration papers. After the declaration papers have been scrutinised, the voting papers excepting those rejected shall be examined and the valid votes counted.

Scrutiny of papers.

(vi) A voting paper shall then be rejected—

- (a) if the number of votes recorded therein exceeds the number of vacancies to be filled;
- (b) if no vote is recorded thereon;
- (c) if it is void for uncertainty;
- (d) if it bears any mark by which the elector can be identified.

(vii) Only one vote shall be recorded for any one candidate. If more votes than one are recorded by a voter for the same candidate, such votes shall be counted as one vote.

Only one vote to be recorded for each candidate.

(viii) The decision of the Registrar and the two members of the Senate appointed to act with him shall be final as to the validity of any votes recorded. In case of a difference of opinion the decision shall be in accordance with the opinion of the majority.

Decision regarding validity.

7. After the scrutiny is completed, and the votes have been counted, a statement shall be prepared showing the number of votes received by each candidate. Such statement shall be signed by the Registrar and the said two members of the Senate and shall be forwarded to the Vice-Chancellor. Candidates who have received the largest number of votes shall, subject to the provisions of Section 13 (2) of the Act, be deemed to be elected up to the number of vacancies available, provided that in the event of two or more candidates obtaining an equal number of votes, the Vice-Chancellor shall give a casting vote.

ADMISSION TO COURSES

*8. No student shall be admitted to the Intermediate course unless he shall have—

Qualification for admission to Intermediate course. (i) passed the Mysore Secondary School Leaving Certificate Examination and obtained the minima as hereinafter prescribed; or

(ii) passed the Matriculation Examination of an Indian University or any other examination recognised by this University as equivalent thereto and satisfies the Council as to his fitness for admission to the course chosen.

No student shall be admitted to a post-secondary diploma course unless he shall have passed the Mysore Secondary School Leaving Certificate Examination with the corresponding optional subject and obtained the minima as hereinafter prescribed or passed the Matriculation Examination of an Indian University or any other examination recognised by this University as equivalent thereto and satisfies the Council as to his fitness for admission to the course chosen.

* Ordinances 8 and 9 will be effective from the year 1940; till then the following Ordinances will be in force:—

8. *Qualification for admission to Intermediate Course.*—No student shall be admitted to the Intermediate Course unless he shall have—

(i) passed the Mysore Secondary School Leaving Certificate Examination and obtained the differential minima as hereinafter prescribed; or

(ii) passed the Matriculation Examination of an Indian University or any other examination recognised by this University as equivalent thereto, and satisfies the Council as to his fitness for admission to the course chosen.

*9. The following shall be the minima referred to in Ordinance 8 (above):—
 Rules of differential minima.

I. Compulsory Subjects

- 40 per cent. in English;
- 35 per cent. in the Second Language;
- 35 per cent. in Elementary Mathematics;
- 35 per cent. in General Science, including Human Physiology;
- 35 per cent. in History, Civics and Geography.

II. Optional Subjects

- 30 per cent. in each division of a group in which there are divisions.†
- 35 per cent. in the aggregate of the group.

* *Rules of differential minima.*—The following shall be the differential minima, referred to in Ordinance 8 (above):—

- (i) 40 per cent. of the total maximum in English;
- (ii) 30 per cent. in the additional subject (*i.e.*, Additional Mathematics, Additional Language, or a Vocational Subject);
- (iii) 35 per cent. in each of the other subjects, with the following exceptions and qualifications:—
 - (a) For students taking Mathematics with or without Physics in Intermediate in Arts, or in Intermediate in Science or Intermediate in Science preparatory to a Diploma course, either 35 per cent. in Additional Mathematics, or 40 per cent. in Elementary Mathematics;
 - (b) For students who take the Intermediate in Arts course with a selected language, either 35 per cent. in a corresponding language taken as an additional subject, or 40 per cent. in a corresponding language taken as Second Language;
 - (c) For students taking any Science subject in Intermediate in Arts or Intermediate in Science, 40 per cent. in Elementary Science;
 - (d) For students taking the I.Sc. course preparatory to Diplomas in Agriculture, Engineering and Technology, Textiles and Applied Chemistry, an aggregate of not less than 35 per cent. in English and Elementary Science, in case the candidate obtains less than 40 per cent. and not less than 30 per cent. in English.

The divisions referred to are as follows:—

A. Humanistic Group—

- 1. History and Geography.
- 2. Optional Language: *One of the following:—*

(a) English	(e) Islamic History
(b) Sanskrit	(f) Indian History
(c) Persian	(g) Hindi
(d) Arabic	

B. Mathematics and Science Group—

- 1. Mathematics.
- 2. Science.

C. Practical Arts Group—

- (i) Domestic Arts—
 - 1. Theory.
 - 2. Practical.

For admission to the Intermediate in Arts course in the University, a candidate should have passed the S.S.L.C. Examination as above taking the Optional Group A (Humanistic Group), provided that, for a combination in the Intermediate in Arts course comprising Mathematics, a candidate should have passed the S.S.L.C. Examination with Group B (Mathematics and Science).

For admission to the Intermediate in Science course in the University, a candidate should have passed the S.S.L.C. Examination as above taking the Optional Group B (Mathematics and Science).

For admission to the diploma courses, the following shall be the scheme of correspondence of optional subjects:—

Agriculture	..	S.S.L.C., Group C (ii) or Group B.
Sericulture	..	S.S.L.C., Group C (iii) or Group B.
Veterinary Science	..	S.S.L.C., Group B.
Engineering	..	S.S.L.C., Group C (iv) in corresponding subjects as below.*
		S.S.L.C., Group B after a year's further course in Industrial Arts.
Teaching	..	S.S.L.C., Group A or Group B.
Commerce	..	S.S.L.C., Group C (v).
		S.S.L.C., Group A or B.
Prints and Engraving		S.S.L.C., Group C (iv) <i>h</i> (Prints and Engraving) or Group B or Group D (<i>b</i>) (Painting and Drawing).
Music	..	S.S.L.C., Group D (<i>a</i>) (Music).
Printing and Binding		S.S.L.C., Group C (iv) <i>i</i> (Composing, Printing or Binding) or Group B.
Pharmacy	..	S.S.L.C., Group B.

Admission of candidates who shall have passed examinations other than the Mysore S.S.L.C. shall be regulated according to these rules in so far as they may be applicable.

- (ii) Agriculture—
 1. Theory.
 2. Practical.
- (iii) Sericulture—
 1. Theory.
 2. Practical.
- (iv) Industrial Arts—
 1. Theory.
 2. Practical.
- (v) Commercial Arts—Each subject forms a division.
- D. *Music and Fine Arts*—
 1. Theory.
 2. Practical.
- C. (iv) *a*—Electrical Engineering.
- C. (iv) *b*—Civil Engineering.
- C. (iv) *c*—Mechanical, Electrical or Automobile Engineering (when courses are suitably revised).
- C. (iv) *d, e and f*—Mechanical, Electrical or Automobile Engineering.

10. No student shall be permitted to study for the B.A., B.A. (Hons.), B.Sc., B.Sc. (Hons.), B.E. or, B.COM. Degree, or for the Pre-Medical Course unless he has passed the Intermediate Examination of this University or any other University, subject in the latter case to the approval of the

Qualification for admission to Degree courses.

University Council.

11. No admission shall be made later than a fortnight from the date of commencement of the session except with the previous approval of the Vice-Chancellor.

Latest date for admission to Colleges.

In other special cases where the approval of the University Council or of the Vice-Chancellor is required, the heads of institutions may admit students provisionally, in which case attendance shall be counted during the provisional period, should such admissions be approved.

11 A. In all applications for admission to any institution of the University, the date of birth shall be given. This date shall be the same as that given for purposes of Matriculation or in the S.S.L.C. record. No change shall be permitted in the date of birth as registered on admission to the University.

12. Students of other Universities seeking admission to the University shall be required to produce a migration certificate from the University from which they have passed the last examination, and pay a fee of rupees five.

Migration certificate to be produced by other University students.

13. No student shall be admitted to any institution of the University unless he produces a transfer certificate from the institution where he studied last.

Transfer certificate.

14. Every student obtaining admission shall be enrolled as a student of the University on payment of the prescribed admission fee.

Enrolment of students.

RECOGNITION OF EXAMINATIONS

15. Subject to the provisions of the Act and the Statutes, the University Council shall have power to recognize—

(i) the examinations conducted by other Universities or bodies, which correspond to the Intermediate Examination of the University of Mysore, for purposes of admission to the degree courses of the University; and

(ii) the examinations of other Universities which correspond to the degree examinations of this University for purposes of admission to the post-graduate courses.

Power to recognize examinations of other Universities.

16. The University Council shall have power to frame rules for the recognition of other examinations, but such rules shall require the approval of the Academic Council before they are given effect to.

Power to frame rules
for recognition.

ADMISSION TO EXAMINATIONS

17. No attendance for instruction in any institution other than an institution conducted, affiliated or approved by the University shall qualify for admission to any examination of the University.

Attendance.

Provided that in respect of post-secondary diploma courses the University Council shall have power to recognize instruction in an approved institution as qualifying for admission to the examination.

Provided that in regard to a second language in which there is no provision for instruction in any University institution, the University Council may grant exemption to a candidate from attendance for instruction in a University institution, if the Council is satisfied regarding the reason for which the second language is offered, the previous training in that language and the arrangements made by the candidate for instruction in the language under the supervision of the head of the institution.

[*Temporary exception to Ordinance 17.*—Provided that Indian students in English Universities returning to India owing to war conditions be admitted to corresponding courses in this University and given credit for attendance put in by them at the English Universities, provided the requisite conditions for initial admission to the course as prescribed in the Ordinances of this University are satisfied.]

18. No candidate shall be admitted to any examination until he has been registered. A candidate shall be registered afresh

Registration for
examinations.

on each occasion on which he presents himself for examination, and no candidate shall be registered until he has paid the prescribed

fee. No candidate for any examination shall be entitled to a refund of any such fee.

19. Every candidate for an examination shall produce such evidence as may be required of having previously passed the

Condition for re-
gistration.

qualifying examination prescribed by the rules, if any. He shall also, unless exempted, produce a certificate of attendance.

19 A. No candidate who is in default in respect of fees, library books, hostel dues or other similar dues to a University institution shall be granted a certificate of attendance. No candidate who is in default in respect of fees, library books, hostel dues or other similar dues to a University institution shall be admitted to any University examination. The University Council

shall have power to withhold the results of a candidate who may be reported subsequent to the examination to be in default in respect of fees or dues of any kind to the University or to any of the institutions, until the dues are cleared.

CERTIFICATES

20. A certificate signed by the Registrar shall be given to each successful candidate at a University examination other than an examination for a degree. The certificate shall set forth the date of the examination, the subjects in which the candidate was examined and the class in which he was placed.

Certificates in the case of examinations other than those for a degree.

21. A diploma under the seal of the University and signed by the Vice-Chancellor shall be presented at a Convocation to each successful candidate at an examination for a degree. The diploma shall set forth the date of the examination, the subjects in which the candidate was examined and the class in which he was placed.

Diplomas in the case of degree examinations.

22. A duplicate of a University certificate or diploma shall not be granted except in cases in which the University Council is satisfied, by the production of an affidavit signed before a magistrate or otherwise, that the applicant has lost the certificate or diploma or that it has been destroyed. In such cases a duplicate inscribed as such may be granted on payment of a fee of ten rupees, the duplicate being signed by the Registrar or the Vice-Chancellor as the case may be.

Conditions for issue of duplicate certificate and diploma.

BOARDS OF STUDIES

23. There shall be a Board of Studies for each of the following branches of study:—

Enumeration of Boards of Studies.

English.
Kannada.
Tamil.
Telugu.
Sanskrit, Pali and Prakrit.
Urdu, Persian and Arabic.
Hindi.
French.
Latin.
Mathematics.
Physics.
Chemistry.

Geology.
 Zoology.
 Botany.
 History.
 Geography.
 Economics, Political Science and Statistics.
 Mental and Moral Science.
 Teaching.
 Engineering and Technology.
 Medicine.
 Agriculture, Sericulture and Veterinary
 Science.
 Commerce.
 Prints, Engraving, Printing and Binding.
 Music.
 Home Science.
 Painting and Drawing.

24. The members of the Boards shall be appointed by the Council from among Professors of the University and other persons possessing special knowledge of the subjects concerned.

25. A member of a Board of Studies shall hold office for three years, but shall be eligible for reappointment:

Term of office. Provided that when a member of a Board on the staff of the University or in the Mysore State service is on leave or is transferred to another service, or when a member of a Board is absent from India, the Council shall have power to make temporary appointment during the period of such absence.

26. No Board shall consist of fewer than three or more than eight members except the Board of Studies in Medicine and the Board of Studies in Engineering and Technology in each of which the maximum number of members may be twelve. The quorum for a meeting of any Board shall be half the strength of that Board.

27. When the Chairman of a Board is temporarily unable to carry on his functions, the Vice-Chancellor may appoint another member of the Board to act for him during such period.

Arrangements during absence of Chairman.

28. The duties of the Boards shall be to recommend text-books, courses of study and the appointment of examiners, and to report or advise on all matters referred to them by the University Council, the Academic Council or a Faculty.

Any Board of Studies may consult specialists who are not members of the Board.

EXAMINATIONS

29. Examinations shall be held at such times, in such places and in such manner as may be prescribed.

Dates of Examinations, etc.

30. There shall be Boards of Examiners for the following subjects or groups of subjects:—

Boards of Examiners.	English.
	Kannada.
	Famil.
	Telugu.
	Sanskrit, Pali and Prakrit.
	Urdu, Persian and Arabic.
	Hindi.
	French.
	Latin.
	Mathematics.
	Physics.
	Chemistry.
	Geology.
	Geography.
	Zoology.
	Botany.
	History.
	Economics, Political Science and Statistics.
	Mental and Moral Science.
	Teaching.
	Engineering and Technology.
	Medicine.
	Agriculture, Sericulture and Veterinary Science.
	Commerce.
	Prints, Engraving, Printing and Binding.
	Music.
	Home Science.
	Painting and Drawing.

31. At least one examiner who is not on the teaching staff of the University of Mysore shall be appointed to each Board.

Each Board to comprise one external examiner.

32. The University Council shall issue detailed instructions to examiners and determine the scales of remuneration to be paid to them, provided that the total remuneration paid to any one examiner in any year shall not ordinarily exceed one thousand rupees.

University Council to issue instructions to examiners.

33. Credit shall be given for regular work and progress during the years of study at the University. Candidates may be required to submit for the inspection of examiners their library and laboratory note books countersigned by the Professor or Professors under whom they have worked.

F E E S

34. The scale of fees for the courses of study for the several examinations of the University shall be as follows:—

Tuition Fees.

A. Professional Courses—

Pre-Medical Course:			Rs.
Whole course	..	..	72 for the course
One subject	..	..	25 "
Two subjects	..	..	45 "
Three subjects	..	..	60 "
M.B.B.S. Degree, whole	..	..	200 a year (payable in four equal instalments)
M.B.B.S. Degree, for a six months' course for the Final M.B.B.S. Examination in respect of a failed candidate			100 (payable in two equal instalments in January and March)
*Fee for a supplementary course	..	..	30 for each subject
Diploma course	..	..	60 per year
L.M.P. (for a course extending for six months or less)	..	..	30
B.E. Degree, whole course	..	..	150 per year
Lectures only for students repeating the course	..	..	45 "
Lectures and drawing for students repeating the course	..	..	60 "
B.T. Degree	..	..	80 "

Provided that in respect of non-Mysorean† students admitted to professional courses of studies from the year 1934-35, the following shall be the scale:—

* In respect of the First, Second and Final M.B.B.S. Examinations the amendment will be effective from the academic session commencing in January 1942, and from June 1941, in respect of candidates for the refresher course for the Final M.B.B.S. Examination.

† *Definition of domicile.*—The domicile of a child irrespective of the place of birth follows the domicile of the father, just as in the case of all others who are legally dependent on their guardians. By reason of the accident of the birth of the child in Mysore, he or she cannot be classed as a Mysorean since at that time the parents had no Mysore domicile.

		Rs.	
Pre-Medical .. ..	..	120	for the course
One subject .. ..	..	40	"
Two subjects .. ..	..	75	"
Three subjects .. ..	..	100	"
M.B.B.S. Degree, whole ..	..	300	a year (payable in four equal instalments)
M.B.B.S. Degree, for a six months' course for the Final M.B.B.S. Examination in respect of a failed candidate .. ..	..	150	(payable in two equal instalments in January and March)
* Fee for a supplementary course ..	..	30	for each subject
Diploma course .. ..	..	120	per year
L.M.P. (for a course of six months' or less for failed students) ..	..	60	
B.E. .. ..	..	250	per year
Lectures only for failed students ..	..	60	"
Lectures and drawing for failed students .. ..	..	60	"
B.T. .. ..	..	120	"
B. Arts and Science Courses—			
Intermediate in Arts, whole (Plus Rs. 8 for Science subjects) ..	..	72	"
Part I .. ..	..	32	"
Part II .. ..	..	44	"
(Plus Rs. 8 for Science subjects)			
Intermediate in Science, whole ..	..	88	"
Part I .. ..	..	32	"
Part II .. ..	..	60	"
For failed I.Sc. candidates who are admitted for lectures only—			
Whole course .. ..	..	72	"
Part I only .. ..	..	32	"
Part II only .. ..	..	44	"
B.A. Degree, whole .. ..	..	96	"
(Plus Rs. 12 for Science subjects)			
(i) English .. ..	..	30	"
(ii) Second Language .. ..	..	20	"
(iii) Optionals .. ..	..	55	"
(Plus Rs. 12 for Science subjects)			
B.A. (HONS.) Degree, whole ..	..	120	"
(i) English .. ..	..	30	"
(ii) Second Language .. ..	..	20	"

* In respect of the First, Second and Final M.B.B.S. Examinations the amendment will be effective from the academic session commencing in January 1942, and from June 1941, in respect of candidates for the refresher course for the Final M.B.B.S. Examination.

		Rs.	
(iii) Minor subjects	..	40	per year
(iv) Major subjects ..	..	60	„
(In the 1st or 2nd year class)			
B.Sc. Degree, whole	..	120	„
(i) English ..	..	30	„
(ii) Second Language	..	20	„
(iii) Optionals ..	..	80	„
B.Sc. (HONS.) Degree, whole	..	144	„
(i) English ..	..	30	„
(ii) Second Language	..	20	„
(iii) Minor subjects ..	..	50	„
(iv) Major subjects ..	..	70	„
(In the 1st or 2nd year class)			
M.A. Degree ..	..	120	„
M.Sc. Degree ..	..	144	„

Note 1.—For purposes of calculation of fees, Mathematics is treated as an Arts subject in the Arts course.

Note 2.—Mysorean women students in the Arts and Science Colleges shall be charged half the rate of fees for tuition. Mysorean women students in the Medical College and the Medical School shall be exempted from payment of tuition fee until the end of 1946–47.

Note 3.—Students belonging to the depressed classes are exempted from payment of tuition fees in the University for a period of five years from June 1940, that is, up to the end of the academical year 1944–45.

35. The fee prescribed shall be paid in equal instalments as follows:—
Instalments.

Arts and Science Colleges:

Eight instalments: June, July, August, September, October, November, December and January;

College of Engineering:

Four instalments: June, September, November and January;

Medical College:

Pre-Medical Class: Two instalments: June and September;

M.B.B.S. Classes: Four instalments: January, March, June and September;

Medical School:

Four instalments: June, September, November and January;

Provided that in respect of students newly admitted or rejoining after a break the first instalment shall be payable on admission and that in respect of those who attend for part of either term the fee for the full term shall be payable, the session consisting of only one term in the case of the Pre-Medical class.

35 A. The fee for the admission of a non-promoted student of a junior class in any course to the promotion examination to which he can be admitted without further attendance shall be equivalent to an instalment of the annual tuition fee for the course.

36. An admission fee shall be levied according to the following scale:—

		Rs.
Admission fee.	Intermediate Course	1
	B.A. or B.Sc. Degree Course ..	2
	M.A., M.Sc., or B.T. Degree Course ..	5
	B.E. Degree Course	10
	Diploma Course	5
	Pre-Medical Course	10

The admission fee shall not be levied in the case of those who, having passed the Intermediate Examination of this University, proceed to the B.A. or B.Sc. Degree course (Pass or Honours), or who having passed the B.A. or B.Sc. Degree Examination (Honours) of this University, proceed to the M.A. or M.Sc. Degree course.

36 A. Any student discontinuing studies in the middle of a course and joining after a year's break, or any student discontinuing studies after completing the course of studies for an examination and joining after a break of three years, or any student leaving the University after obtaining a leaving certificate and rejoining, shall be required on re-admission to pay the admission fee prescribed for the course.

37. Provision shall be made for awarding free-studentships up to a maximum of 30 per cent. of the number of men students in each constituent college excepting the

Free-studentships in the degree courses. Medical College and the Medical School and up to a maximum of 50 per cent. of the number of women students, the percentage being calculated on the total strength of the college exclusive of the number of holders of Government scholarships. Such free-studentships shall be awarded by the respective college councils. The poverty of the applicant shall be a primary condition of the award in each case.

38. The scale of free-studentships in the Intermediate Colleges shall be 25 per cent. of the number of men students in each Intermediate College and 50 per cent. of

Free-studentships in the Intermediate courses. the number of women students, the percentage being calculated on the total strength of the college exclusive of the number of holders of Government scholarships. The free-studentships shall be awarded by the respective college councils. The poverty of the applicant shall be a primary condition of the award in each case.

39. The scale of fees for admission to the several examinations of the University shall be as follows:—
Fees for examinations.

			RS.
(1)	(a)	Intermediate in Arts, whole	30
		Part I	14
		Part II	21
	(b)	Intermediate in Science, whole	30
		Part I	14
		Part II	21
(2)	(a)	B.A. Degree, whole (plus Rs. 5 for Science subjects)	40
	(b)	Compulsory English	10
	(c)	Compulsory Second Language	6
	(d)	Optional subjects (plus Rs. 5 for Science subjects)	30
(3)	(a)	B.A. (HONS.) Preliminary, whole (plus Rs. 5 for Science subjects)	20
		English	10
		Second Language	6
		Optional Subjects (Minor) (plus Rs. 5 for a minor group including a Science subject)	10
	(b)	B.A. (HONS.) Degree, Final (plus Rs. 10 for Science subjects)	40
(4)	(a)	B.Sc. Degree, whole	50
	(b)	Compulsory English	10
	(c)	Compulsory Second Language	6
	(d)	Optional Subjects	40
(5)	(a)	B.Sc. (HONS.) Preliminary	25
		English	10
		Second Language	6
		Optional subject (Minor)	15
	(b)	B.Sc. (HONS.) Degree, Final	50
(6)		M.A. Degree	100
		M.Sc. Degree	100
(7)		B.T. Degree, whole	35
		Group B, Practice in Teaching only	15
(8)		Pre-Medical Examination:—	
		Whole examination	30
		One subject only	10
		Two subjects only	18
		Three subjects only	25
(9)	I	M.B.B.S., whole	35
		One subject	15
		Two subjects	25
	II	M.B.B.S., Part I, one subject only	15
		Part II, whole	25
		One subject only	15
		Part III, whole	25
		One subject only	15

			Rs.
	Final M.B.B.S., whole	.. ..	45
	One subject only	.. ..	20
	Two subjects	.. ..	35
(10) (a)	First Examination in Engineering:—		
	Whole	.. ..	20
	One subject	.. ..	10
(b)	Second Examination in Engineering:—		
	Whole	.. ..	20
	One subject	.. ..	10
(c)	Third Examination in Engineering:—		
	Whole	.. ..	20
	One subject	.. ..	10
(d)	Final Examination for the B.E. Degree:—		
	Whole	.. ..	45
	One subject	.. ..	15
(11)	Post-Secondary Diploma Courses, Preliminary Examination or any intermediary examination.		15
	Final Examination	.. ..	20

Note 1.—Students belonging to the depressed classes shall be exempted from payment of fees in respect of examinations conducted by the University up to the end of May 1945.

Note 2.—For purposes of calculation of fees, Mathematics shall be treated as an Arts subject in the Arts course.

40. The University Council may fix and levy such fees as it may, from time to time, determine for any information or docu-

Fees for information to be furnished from the University Office or for any other purpose.

THE FOLLOWING FEES ARE PRESCRIBED :—

Sl. No.	Items	Fee	REMARKS
		Rs.	
1	Sports fee	4	Per year
2	Union* fee	4	„
3	Reading Room (where membership of Union is not compulsory)	2	„
3 (a)	Sports and Reading Room fees for the Pre-Medical class and for the Final M.B.B.S. repeat course of six months' duration.	4	For the course

* Union means University Union.

Sl. No.	Items	Fee	REMARKS
4	Medical examination fee	Rs. 1	Payable in the first, third and fifth year classes only.
5	For an eligibility certificate (for admission of students of other Universities)	5	
6	For a migration certificate (for students proceeding to other Universities)	2	
6 (a)	For duplicate migration certificate	1	Each time. The application should be accompanied by a certificate of 'no dues' from the head of the College in which the applicant last studied.
7*	For permission to change name	5	
8	For issue of the Intermediate Examination Certificate after the expiry of six months from the notification of the results in the Gazette.	2	
9	For issue of a provisional certificate in respect of a degree examination before the degree is taken.	2	(Plus Rs. 6 for notifying)
10	For a duplicate of certificate or diploma.	10	
11	For a duplicate leaving certificate	1	
12	For a duplicate membership card	1	
13	For a duplicate scholarship card	1	

** Procedure regarding change of name:—*

A student of the University, past or present, desiring to change his name should sign a declaration before a magistrate and forward it to the Registrar through the head of the institution in which he last studied or is studying, with an application in the prescribed form and a fee of Rs. 5 for registering the change plus charges for notifying the change (about Rs. 6).

Sl. No.	Items	Fee	REMARKS
14	Association fee besides fee for Reading Room in respect of the Intermediate College, Bangalore	Rs. 2	
15	For supplying copies of or extracts from applications for University examinations	2	
16	For furnishing to a candidate a statement of marks obtained by him in each examination where there are no parts or in each part of any examination where there are parts	2	Details regarding each subject or part for which a separate minimum is prescribed will be furnished. Application should be made by the candidate.
17	For re-totalling the marks in each paper of an examination where there are no parts or of each part of an examination where there are parts	10	Application to be supported by the head of the institution from which the candidate last appeared within one month after the publication of the results in the Mysore Gazette

Note.—For information or documents not otherwise provided for, a fee of Rs. 2 will be charged.

UNIVERSITY EXTENSION SCHEME

41. The University Council shall appoint a committee to make arrangements for extension work including lectures for the benefit of persons who are unable to attend the ordinary courses of study at the University, and may direct the publication of any extension lectures on the recommendation of the said committee.

PUBLICATION

42. The University Council shall appoint a committee or committees for printing and publishing approved works of merit, a special committee being appointed for the publication of Kannada works.

43. Works of merit recommended by such committees may be published under the orders of the University Council at the cost of the University.

RESIDENCE

44. Every student who does not reside with his parents or guardian shall reside in hostels or lodgings approved by the University Council or in the case of an affiliated college by its management.

45. The University Council shall appoint a committee to deal with questions relating to the residence of students.

Students' Residence Committees.

HEALTH

46. Every student shall, on admission to the University, present, besides the other prescribed certificates, a certificate of medical examination, wherever possible, from the school or college last attended.

Medical examination certificates to be produced on admission.

47. Every student admitted to the University shall be required to undergo medical examination during his course in the University in accordance with directions issued by the University Council.

Medical examination during the course.

TERMS, VACATIONS AND HOLIDAYS

48. The University session for the Arts and Science Colleges, the College of Engineering, and the Medical School shall commence on the 1st June and end on the 8th March following and shall comprise two terms, namely, the first term from the 1st of June to the commencement of the Dasara Holidays and the second term from the re-opening after the Dasara Holidays to the 8th March. In respect of the Medical College, the session for the Pre-Medical class shall commence on the 1st June and end on the last day of November; the session for the M.B.B.S. Degree classes shall commence on the 9th January and end on the 30th November and shall comprise two terms, namely, the first term from the 9th January to the 8th March and the second term from the 1st June to the 30th November.

49. The long vacation of the University shall commence on the 9th March and continue up to the end of May, provision being made for clinical work in the Medical College and the Medical School during the vacation.

Vacation.

50. The casual holidays for students during the session shall be fixed by the Council and notified at the beginning of each year.

Holidays. The Office of the University shall be closed on Sundays, the penultimate Saturday of each month, gazetted holidays and such other holidays as may be notified by the Vice-Chancellor.

MIGRATION CERTIFICATE

51. A migration certificate in the prescribed form may be issued by the Registrar to any student of the University on payment of a fee of two rupees.

52. No migration certificate shall be granted to a student unless he produces a certificate from the Principal of the college where he has studied that he has paid all his dues to the college, the hostel, and the University Union and returned all library books borrowed.

52 A. A student who has completed the course of study for any University Examination and migrated to another University may be permitted at the discretion of the University Council to appear for that examination without further attendance for instruction, subject to the conditions of Ordinance 54.

53. No migration certificate shall be issued to a student who has been debarred from attendance at an examination or dismissed from the University for misconduct.

PROCEDURE TO BE ADOPTED IN GRANTING AFFILIATION

53 A. A college applying for recognition, affiliation or approval shall send a formal letter of application to the Registrar between the 1st July and 31st October preceding the academical year in which the courses are proposed to be started and shall give full information in the letter of application on the following matters:—

- (a) Constitution and personnel of the Managing Body.
- (b) Subjects and courses in which recognition, affiliation or approval is sought.
- (c) Previous applications, if any, for recognition, affiliation or approval in the same subjects and their disposal.
- (d) Accommodation, equipment, the strength of the college, the number of students for whom provision has been made or is proposed to be made. The information relating to accommodation should be accompanied by drawings.
- (e) Qualifications, salaries and work of the teachers, together with a time-table of work.

(f) Hostels and lodgings, and playgrounds; and residences for the Principal and the other members of the staff.

(g) Fees proposed to be levied and the financial provision made for capital expenditure on buildings and equipment for the continued maintenance of the college.

All applications for affiliation of colleges shall be considered by the University Council not later than the month of

November.
Applications when considered.

The University Council may call for any further information which it may deem necessary before proceeding with the application, or may advise the management that the application is premature and should be submitted in a subsequent year, or may decline to proceed with the application if it is satisfied that the arrangements made, or likely to be made, before the beginning of the academical year in which the courses are to be started for the conduct of courses are not sufficient or suitable, or if the college has failed to observe the conditions laid down in respect of any previous recognition, affiliation or approval.

Procedure on receipt of application.

If the University Council decides to proceed with the application, it shall direct a local enquiry to be made by a competent person or persons appointed by it in this behalf: provided that it shall be competent for the University Council to dispense with the enquiry above mentioned in the case of any subject or group of subjects in which it does not, for special reasons which shall be recorded, consider a local enquiry necessary.

Local enquiry.

After considering the report of the local enquiry, if any, and after making further enquiries it may deem necessary, the University Council shall decide whether the affiliation should be granted or refused, either in whole or in part, and shall after consultation with the Academic Council, grant or refuse the affiliation accordingly. In case the affiliation is granted, the fact shall be reported to the Academic Council and the Senate at the next meeting.

Affiliation may be granted to a college or to departments of a college which provides courses of instruction in Arts, Science, Engineering, or Medicine. The Grant of recognition, affiliation or approval. recognition, affiliation or approval shall be given specially for each subject or each group of subjects and for each separate standard.

Where a college is affiliated in a number of optional subjects, the college shall be at liberty to provide instruction in any combinations of them out of the list approved by the Academic Council, provided it satisfies the University Council that the accommodation and staff are adequate whenever a fresh

Combination of optional subjects.

combination is proposed to be introduced. A statement of the different combinations of subjects in which instruction is provided shall be forwarded to the University Council before the close of the first term in every year.

The affiliation granted may be provisional. If provisional, affiliation shall be granted for a fixed period; the length of the period and the conditions which shall be fulfilled by the college before the expiry of the period shall be specified in the order of the University Council granting the affiliation. If the conditions are not fulfilled by the end of the period fixed, the affiliation shall cease automatically, and in no case shall any extension of time be permitted. If the conditions are fulfilled the University Council shall have the power at the end of the period to confirm affiliation. The confirmation of affiliation shall be reported to the Academic Council and the Senate.

Affiliation shall in no case be granted with retrospective effect. Attendance at courses of instruction provided in colleges or in subjects before affiliation is granted shall not qualify for the grant of certificates of attendance; and such attendance shall not entitle any candidate to exemption from the production of certificates of attendance.

An application for affiliation may be withdrawn at any time before an order has been passed by the University Council, provided that the college shall not be entitled to a refund of the fee paid, in cases in which the University has incurred the expenditure of sending out an Inspection Commission.

Where a college desires to add to the course of instruction in respect of which it is affiliated, the procedure prescribed in the preceding Ordinances shall, so far as may, be followed.

Procedure for further recognition, affiliation and approval.

An affiliated college shall satisfy the following academical requirements:—

Academical requirements. (1) No lecture shall be delivered to more than sixty-four students at a time.

Provided that the University Council may permit lectures to be delivered to more than sixty-four students at a time, if it is satisfied that the size, structure, seating arrangements and acoustic properties of each lecture room concerned are suitable and that adequate arrangements for the tuitional instruction of students have been made.

(2) No teacher shall teach for more than twenty hours a week.

Provided that in the case of M.A. and M.Sc. classes, two hours of teaching shall count as three hours for the purpose of this calculation.

(3) Laboratories of approved design shall have been constructed and adequately equipped.

(4) A demonstrator shall be provided for every sixteen students during practical work in any experimental science subject.

(5) Where adequate hostel accommodation does not already exist, it shall be provided within two years from the date of affiliation.

B. Academic Ordinances

BREAK OF CONTINUITY

54. A student who has attended the course of studies for any examination for one full session may be permitted a break of continuity for a period not exceeding one

Break of continuity. year. A student who has completed the course of studies for any examination may be permitted to appear for the examination without further attendance for instruction within a period not exceeding three years after the completion of the course except as otherwise provided for. After the expiry of such period of three years, he shall be required to attend again the final year of the course before he is permitted to appear for the examination.

A student who has been admitted to a course for further instruction in any year before the expiry of the period specified in the preceding paragraph shall be required to produce a fresh attendance certificate before he is permitted to appear for the examination.

INTERMEDIATE EXAMINATION

55. The course of study for the Intermediate Examination shall extend over two years.

Length of course.

56. Each year shall be taken as a unit for purposes of calculating attendance. A student shall be considered to have completed the attendance for the year, if he has attended three-fourths of the number of working periods in each of the subjects during the said year, and his conduct and progress have been satisfactory.

Minimum attendance.

57. The University Council shall have power to condone shortage of attendance on the recommendation of the heads of institutions.

Condonation of Applications for the condonation of short-shortage of attendance. age of attendance shall be made to the Registrar in the month of January each year.

58. At the Intermediate Examination in Arts, a candidate Course of Studies shall be examined in—
for I.A.

(1) *English*.—The course shall consist of the study of English Grammar, the detailed study of prescribed books in Poetry, Drama and Prose and Non-detailed study of other prescribed books, and the examination shall comprise three papers:—

1. English Grammar.
2. Poetry and Drama.
3. Prose—Detailed and Non-detailed.

(2) *Second Language*.—One of the following languages :—
Kannada, Urdu, Tamil, Telugu, Sanskrit, Persian, Arabic, French and Latin.

The examination shall comprise two papers as under :—

(a) *Indian Languages*.—

(i) Composition based on texts prescribed for non-detailed study and translation from English to Second Language. Common to I.A. and I.Sc.

(ii) Texts for detailed study and grammar.

(b) *Classical and Western Languages*.—

(i) Texts, Grammar and Translation. Common to I.A. and I.Sc.

(ii) Texts and Grammar. I.A. only.

Note.—(a) *Indian Languages*.—

Kannada, Tamil, Telugu and Urdu.

(b) *Classical and Western Languages*.—

Sanskrit, Persian, Arabic, French and Latin.

(3) *Optional Subjects*.—Three of the following :—

A selected language, History, Logic, Economics, Geography, Mathematics, Physics, Chemistry, Biology:

Provided that—

(i) Either Logic or Mathematics must be taken ;

(ii) A candidate taking Physics must take Mathematics ;

(iii) Not more than one of the last three subjects may be offered ;

(iv) The same language cannot be taken under both (2) and (3).

The selected language shall be taken from Old and Middle Kannada, Modern Kannada, Tamil, Telugu, Urdu, Sanskrit, Hindi, Arabic, Persian (Old and Modern).

The following shall be the scheme regarding the corresponding language for each selected language in the Intermediate in Arts list:—

Selected Language in the I.A. Scheme	Corresponding Language in the S.S.L.C. Scheme
Old and Middle Kannada	Kannada
Modern Kannada	Kannada
Tamil	Tamil
Telugu	Telugu
Urdu	Urdu
Sanskrit	Sanskrit
Persian	Persian
Arabic	Arabic
Hindi	Hindi or Sanskrit

The examination in the optional group shall comprise two papers on each of the subjects selected.

59. At the Intermediate Examination in Science, a candidate shall be examined in—

Course of Studies
for I.Sc.

(1) *English*.—Same as for the Intermediate Examination in Arts.

(2) *Second Language*.—One of the following languages:—
Kannada, Urdu, Tamil, Telugu, Sanskrit, Persian, Arabic, French and Latin.

The Course shall consist of the non-detailed study of prescribed texts.

The examination shall comprise:

(a) *Indian Languages*.—

One paper in Composition based on texts prescribed for non-detailed study and translation from English to Second Language.
Common to I.A. and I.Sc.

(b) *Classical and Western Languages*.—

Texts, Grammar and Translation. Common
to I.A. and I.Sc.

Note.—(a) *Indian Languages*.—

Kannada, Tamil, Telugu and Urdu.

(b) *Classical and Western Languages*.—

Sanskrit, Persian, Arabic, French and Latin.

Elementary Mathematics.—The course in Elementary Mathematics shall be given in the first year class to those who do not offer for the optional subjects a group containing Mathematics.

The examination shall comprise one paper to be given in the promotion examination at the end of the first year and shall be common to all the Intermediate Colleges.

(3) *Optional Subjects*.—One of the following groups:—

- (i) Physics, Chemistry, Mathematics.
- (ii) Physics, Mathematics, Geology.
- (iii) Botany, Zoology, Chemistry.
- (iv) Botany, Geology, Chemistry.
- (v) Geology, Zoology, Chemistry.
- (vi) Botany, Zoology, Geology.
- (vii) Physics, Mathematics, Economics.
- (viii) Economics, Geology, Chemistry.
- (ix) Economics, Geology, Geography.
- (x) Mathematics, Economics, Geography.
- (xi) Economics, Geography, Chemistry.
- (xii) Geology, Geography, Chemistry.

The examination shall comprise two papers in each division of the group.

60. (i) The Intermediate Examination in Arts and the Intermediate Examination in Science shall be held in two parts—

Intermediate examination—compartments and minima.	Part I comprising English and the Second Language, and Part II comprising the other subjects.
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(ii) Candidates at the Intermediate Examination shall present themselves for examination in both the parts except as provided hereinafter.

(iii) No candidate shall be declared to have passed the Intermediate Examination in Arts or the Intermediate Examination in Science unless he obtains not less than 35 per cent. of the total marks in English, 35 per cent. of the total marks in the second language and 35 per cent. of the total marks in the whole group of optional subjects and also not less than 30 per cent. of the total marks in each subject of the optional group.

(iv) Candidates failing to secure the above minima, but obtaining not less than 40 per cent. of the total maximum marks in either part as well as the requisite minimum in each division of the part, will be permitted to appear for the other part at a subsequent examination held within two years of passing in the former part.

(v) A candidate who thus presents himself for examination in only one part shall be declared to have passed in that part also if he obtains not less than 40 per cent. of the total maximum marks in the part, as well as the requisite minimum in each division of the part.

61. The results of the examination shall be declared in three

Classification of successful candidates. classes as follows:—

First Class .. Those who obtain not less than 60 per cent. of the aggregate marks in both the parts taken together.

Second Class .. Those who obtain less than 60 per cent. but not less than 50 per cent.

Third Class .. Other successful candidates.

The names of the candidates who pass in the first and second classes shall be arranged in order of merit, and the names of those who pass in the third class shall be arranged in alphabetical order.

Candidates who present themselves for examination in Part I only or in Part II only and are declared to have passed shall not be classed.

DEGREE COURSES

62. The period of study necessary to qualify for graduation shall be as noted below, and shall be subsequent to the date at which the student passes the Intermediate Examination of this University or an examination recognised as equivalent to it:—

Length of Degree course.

B.A.	..	Not less than	2	years
B.A. (HONS.)	..	" "	3	"
B.Sc.	..	" "	2	"
B.Sc. (HONS.)	..	" "	3	"
B.E.	..	" "	4	years followed by a year's practical course.

M.B.B.S. .. " " 5½ years.

63. In the case of all degree courses, each year shall be taken as a unit for purposes of calculating attendance; and a student shall be considered to have completed the attendance for the year, if he has attended not less than three-fourths of the number of working periods in each of the subjects comprised in the course and his progress and conduct have been satisfactory. The University Council shall have power to condone shortage of attendance on the recommendation of the heads of colleges.

Attendance.

Application for condonation of shortage of attendance shall be made to the Registrar in the month of January each year in respect of Arts, Science and Engineering Examinations and in the last week of November in respect of the Pre-Medical and M.B.B.S. examinations.

64. (i) No candidate shall offer a subject at an examination for the Bachelor's Degree in Arts or Science unless he shall have passed the Intermediate Examination in the corresponding subject, if any; but the University Council shall have power to grant exemption from this rule in special cases.

Correspondence of subjects offered.

(ii) Only candidates who have passed with Mathematics as an optional subject in the Intermediate Examination in Arts or in the Intermediate Examination in Science shall be allowed to take Economics or Experimental Psychology in the B.Sc. Degree Course.

(iii) Only candidates who have passed with Mathematics and Physics as optional subjects in the Intermediate Examination in Arts or in the Intermediate Examination in Science shall be allowed to take the course in Experimental Psychology for the B.Sc. (HONS.) Degree.

65. No candidate who has been declared to have passed in a part or parts of a degree examination shall be permitted to Re-appearance for the same examination. appear again in the same part or parts at the same examination.

66. A candidate who has passed a degree examination with any group of optional subjects may be permitted to appear for a subsequent examination for the same degree with a different group of optional subjects under conditions to be prescribed. Re-appearance for an examination with additional subject.

67. A candidate who has passed the B.A. or B.Sc. Degree Examination may be admitted to the post-graduate Honours course in one of the optional subjects studied for the Degree Examination. Such a candidate shall be exempted from the Honours Preliminary Examination in Parts I and II, and in Part III except as provided hereunder, and shall be permitted to appear for the final examination for the Honours Degree after a course of two years:— Exemption in certain cases for Honours candidates.

(i) A candidate for Honours in English shall appear at the end of the first year for the Preliminary Examination in (1) Rhetoric and Principles of Criticism and (2) Outlines of English History.

(ii) A candidate for Honours in Kannada shall appear at the end of the first year for the Preliminary Examination in (1) Tamil or Telugu and (2) Cultural and Historical Studies relating to Karnataka.

(iii) A candidate for Honours in History shall appear at the end of the first year for the Preliminary Examination in the papers in the minor subject not already offered by him at the B.A. Degree Examination.

(iv) A candidate for Honours in a Science subject other than Experimental Psychology or Economics as major subject shall in the first year undergo a course in German and pass a college test in German.

(v) A candidate for Honours in Persian shall appear at the end of the first year for the Preliminary Examination in Drama and Fiction.

A candidate who has passed part of the B.A. or B.Sc. Degree Examination may be admitted to the three-year Honours course with such exemption as may be granted by the University Council in consideration of his having passed the equivalent examination in English, Second Language or minor subject at the Degree Examination.

B.A. DEGREE

68. The course of study leading to the degree of Bachelor of Arts shall extend over two years after the Intermediate Examination, and shall comprise English, a Second

Course of studies. Language and three of the following subjects: English, Philosophy, a Classical Language, a Vernacular, Politics, Economics, Sociology, History, Education, Mathematics, Geography, Biology, Physics, Chemistry, Botany, Zoology—which shall be taken in combinations approved by the Academic Council, from time to time:*

Provided that not more than one of the last five subjects may be offered in any combination except when English is one of the optional subjects in the combination, in which case two may be offered.

69. The examination shall consist of two papers in English Composition, one paper in Second Language Composition and Translation from English to Second Language, or Translation in respect of Classical Languages, and three papers in each of the three selected subjects.

The papers on English Composition shall be based on the non-detailed study of prescribed text-books.

The paper on Second Language Composition or Translation shall be based on prescribed text-books.

70. The Second Language shall be selected from Kannada, Urdu, Tamil, Telugu, and French for Composition; and Sanskrit, Persian, Arabic and Latin for Translation. The Classical Language shall be selected from Old and Middle Kannada, Sanskrit Pali and Prakrit, Persian (Classical), Arabic, Avestan and Pahlavi.

* The following are the combinations approved by the Academic Council:

English, Philosophy, Classical Language
Economics, Philosophy, Sociology
Economics, Politics, Philosophy
History, Economics, Politics
History, Economics, English
History, Economics, Sociology
History, Politics, a Classical Language
English, Politics, Philosophy
History, Politics, Philosophy
Philosophy, Politics, Sociology

English, History, Politics
Mathematics, Economics, Politics
English, History, Kannada
History, Sociology, Persian
English, Physics, Mathematics
English, Botany, Zoology
English, History, Philosophy
English, History, Classical Language

B.SC. DEGREE

71. The course of study leading to the degree of Bachelor of Science shall extend over two years after the Intermediate Examination, and shall comprise English Composition, a Second Language and one of the following groups:—

- (i) Mathematics, Physics, Chemistry;
- (ii) Botany, Zoology, Geology;
- (iii) Botany, Zoology, Chemistry;
- (iv) Physics, Mathematics, Geology.
- (v) Chemistry, Geology, Botany;
- (vi) Chemistry, Geology, Zoology;
- (vii) General Physiology, Chemistry, Zoology or Botany;
- (viii) Economics, Geology, Chemistry;
- (ix) Physics, Mathematics, Economics;
- (x) Experimental Psychology, Mathematical Statistics, Child Psychology and Educational Psychology;
- (xi) 1. Mathematics.
2. Mathematical Statistics and Mathematical Economics.
- 3. One of the following:—
 - (a) Economics.
 - (b) Sociology.
 - (c) Psychology (General and Experimental).
- (xii) Economics, Geology, Geography;
- (xiii) Mathematics, Economics, Geography;
- (xiv) Geography, Economics, Chemistry;
- (xv) Geography, Geology, Chemistry;
- (xvi) Mathematics, Statistics, Geography;
- (xvii) Mathematics, Sociology, Geography.

72. The examination shall consist of two papers in English Composition, one paper in Second Language Composition and Translation from English to Second Language or Translation in respect of Classical Languages and three papers in each of the three selected subjects.

The papers on English Composition shall be based on the non-detailed study of prescribed text-books.

The papers on Second Language Composition or Translation shall be based on prescribed text-books.

73. The Second Language shall be selected from Kannada, Urdu, Tamil, Telugu and French for Composition; and Sanskrit, Persian, Arabic and Latin for Translation.
Second language.

BACHELOR'S DEGREE EXAMINATIONS IN ARTS AND SCIENCE

74. The examinations for the Bachelor's Degree in Arts and Science shall be held in three parts as under:—

- (i) Compulsory English;
Compartments. (ii) Second Language;
 (iii) Optional Subjects;

Provided that candidates shall present themselves for the complete examination when appearing for the first time.

75. No candidate shall be declared to have passed in part (i) unless he obtains not less than 35 per cent. of the total marks in Compulsory English. No candidate shall be declared to have passed in part (ii) unless he obtains not less than 35 per cent. of the marks in Second Language. No candidate shall be declared to have passed in part (iii) unless he obtains not less than 35 per cent. of the total marks in each subject comprised in the part and 40 per cent. of the aggregate of the three subjects.

76. The results in each part shall be declared in three classes as follows:—

Classification.

First Class .. Those who obtain not less than 60 per cent. of the aggregate marks in the part.

Second Class .. Those who obtain less than 60 per cent. but not less than 50 per cent.

Third Class .. Other successful candidates.

The names of those who pass in the first or second class shall be published in the order of merit, and the names of those who pass in the third class shall be published in alphabetical order.

Note.—A candidate who fails in the B.A. or B.Sc. degree examination but obtains not less than 60 per cent. of the total maximum marks in any of the optional subjects (Part III) shall be exempted from appearing in the subject or subjects at a subsequent examination held within two years of passing in the subject; provided that the names of successful candidates who have been exempted in one or more subjects shall be published in a separate list in alphabetical order.

B.A. HONOURS DEGREE

77. The course of study leading to the degree of Bachelor of Arts (HONS.) shall extend over three years after the Intermediate

Examination in Arts, and shall comprise
Course of studies. English, a Second Language and one of the following as the major subject with a suitable minor subject, and in the case of Mathematics one or more special subjects:—

English, Kannada, Sanskrit, Persian, Arabic, Urdu, Philosophy, History, Politics, Economics, Mathematics.

78. The examination shall consist of two papers in English Composition, one paper on Second Language Composition and

Scheme of examination. Translation from English to Second Language or Translation in respect of Classical Languages, eight papers in major subject and four papers in minor subject:

Provided that in the case of Mathematics there shall be seven papers in the major subject, three papers in the minor subject and two papers on the special subjects, and that in the case of Sanskrit there shall be nine papers in the major subject and three papers in the minor subject.

The papers on English Composition shall be based on the non-detailed study of prescribed text-books.

The paper on Second Language Composition or Translation shall be based on prescribed text-books.

79. The Second Language shall be selected from Kannada, Urdu, Tamil, Telugu and French for Composition; and Sanskrit, Persian, Arabic and Latin for Translation.

Second language.

B.SC. HONOURS DEGREE

80. The course of study leading to the degree of Bachelor of Science (HONS.) shall extend over three years after the Intermediate Examination in Science, and shall

Course of studies. comprise one of the following optional groups of subjects consisting of a major subject and a minor subject, together with English and a Second Language:—

- (1) Mathematics (major) with two out of a prescribed list of special subjects and Physics as minor subject.
- (2) Physics (major) including Mathematical Physics and Chemical Physics with Mathematics as minor subject.
- (3) Chemistry (major) including Plant Chemistry or Colloid and Capillary Chemistry with Physics as minor subject.
- (4) Geology (major) with Zoology or Botany or Chemistry as minor subject.
- (5) Zoology (major) with Botany or Geology or Chemistry as minor subject.
- (6) Botany (major) with Zoology or Geology or Chemistry as minor subject.
- (7) Experimental Psychology (major) with Child Psychology, Educational Psychology and Mathematical Statistics as minor subject.
- (8) Economics (major) with Advanced Statistics, Mathematical Economics and Social Measurements as minor subject.

*The course of study in the first year class shall, in groups (1) to (6), include in addition a course in German, which shall comprise elements of grammar and exercises in translation.

81. The examination shall consist of one paper in English Composition, one paper in Second Language Composition and Translation from English to Second Language or Translation in respect of Classical Languages and papers in the optional subjects as under:

			Final (Major)	Preliminary (Minor)
(a) Mathematics	9	3
Physics	..	..	9
Chemistry	..	..	9
Botany	..	..	9
Geology	..	..	9
Zoology	..	..	9
(b) Experimental Psychology	}	..	8	4
Economics				

The paper on English Composition shall be based on the non-detailed study of prescribed text-books.

The paper on Second Language Composition or Translation shall be based on prescribed text-books.

82. The Second Language shall be selected from Kannada, Urdu, Tamil, Telugu, and French for Composition; and Sanskrit, Persian, Arabic and Latin for Translation.

Second language.

HONOURS DEGREE EXAMINATIONS

83. The Honours Degree Examinations shall be taken in two parts—(a) the Preliminary Examination at the end of the second year, (b) the Final Examination at the end of the third year.

Honours examination to be taken in two parts.

(a) The Preliminary Examination shall consist of the following three parts:—
Preliminary examination.

* This clause will be effective from 1937-38 commencing with the First Year Honours class.

- (i) English Composition .. { 2 papers for B.A. (HONS.)-
1 paper for B.Sc. (HONS.)-
- (ii) Second Language—
Composition or Translation—1 paper
- (iii) Minor Subject—
(1) English, Kannada, Persian,
Arabic, History, Philos-
ophy, Economics (B.A.
and B.Sc.), Experi-
mental Psychology .. 4 papers in each case
(2) Sanskrit, Mathematics,
Physics, Chemistry, Geo-
logy, Zoology, Botany .. 3 papers in each case

Provided that candidates shall present themselves for the whole examination when appearing for the first time.

- (b) The Final Examination shall consist of the remaining.

Final examination.

* No candidate shall be admitted to the Final Examination for the B.Sc. Honours Degree in groups (1) to (6) of Ordinance 80 unless he is certified by the college authorities to have satisfied them in a test in translating simple scientific passages in German.

(c) A candidate for the Honours degree shall not appear for either the Preliminary or the Final Examination later than five academic years after admission to the first year Honours class; nor shall he be permitted to undergo the complete Final Examination for Honours more than once.

84. A candidate who fails in the Preliminary Examination may be allowed to proceed to the Final Year course, in which case he shall take along with the Final Examination such part or parts of the Preliminary Examination as he may have failed in. Until such candidate passes in the Preliminary Examination his results in the Final Examination shall not be declared.

85. The classification in the Honours Examination shall be determined on the results of the Final Examination, only a pass being declared in the Preliminary Examination.

Classification in
Honours degree.

* This clause will be effective from 1937-38, commencing with the First Year Honours class.

86. No candidate shall be declared to have passed in any part of the Preliminary Examination unless he obtains not less than 35 per cent. of the aggregate marks in that part.

Minima for Preliminary Examination.

87. No candidate shall be declared to have passed the Final Examination for the Honours degree in an Arts subject unless he obtains not less than 40 per cent. of the total marks in the examination.

Minima for Final Examination.

No candidate shall be declared to have passed the Final Examination for the Honours degree in Mathematics or in a Science subject, unless he obtains not less than 35 per cent. of the aggregate marks in each group* and 40 per cent. of the total marks in the whole examination (including class work and class examination).

The results of the Final Examination shall be declared in three classes as follows:—

First Class .. Those who obtain not less than 60 per cent. of the total marks.

Second Class .. Those who obtain less than 60 per cent. but not less than 50 per cent.

Third Class .. Other successful candidates.

The names of those who pass in the first or second class shall be published in order of merit, and the names of those who pass in the third class shall be published in alphabetical order.

Candidates failing to obtain the requisite minimum for an Honours degree but obtaining not less than 35 per cent. of the aggregate marks in the Final Examination and passing in the Preliminary Examination may, at the discretion of the Board of Examiners in the major subject, be recommended for the Pass degree.

87 A. A candidate for the B.A. Honours degree or the B.Sc. Honours degree who, having undergone the entire course for the degree, fails to secure either the Honours degree or the Pass degree in accordance with the foregoing ordinances shall be eligible for admission to the Senior B.A. or Senior B.Sc. class, as the case may be, and appear for the B.A. or B.Sc. degree examination under the following provisions:

(i) A candidate for B.A. Honours in English, Kannada, Sanskrit, Persian, Urdu, Politics, History or Philosophy shall undergo the course for, and be examined in, the B.A. degree examination in Compulsory English, Second Language and a

* For the specification of groups, *vide* detailed scheme of examination in Chapter II.

combination of optional subjects, out of those approved under Ordinance 68, which shall include the subject of the B.A. degree course corresponding to his major subject for Honours, subject to the conditions of Ordinance 64.

(ii) A candidate for B.A. Honours in Economics or Mathematics shall undergo the course for, and be examined in, the B.A. degree examination in Compulsory English, Second Language and a combination of optional subjects out of those approved under Ordinance 68, which shall include his minor subject for Honours and the subject of the B.A. degree course corresponding to his major subject for Honours, subject to the conditions of Ordinance 64.

(iii) A candidate for the B.Sc. Honours degree shall undergo the course for, and be examined in, the B.Sc. degree examination in Compulsory English, Second Language and a group of optional subjects prescribed in Ordinance 71, which shall include the two subjects of the B.Sc. degree course corresponding to his major and minor subjects for Honours, subject to the conditions of Ordinance 64.

(iv) (a) A candidate appearing for the B.A. or B.Sc. degree examination as above shall be granted exemption from attendance and examination in respect of the subject of the B.A. or B.Sc. degree course in which he shall have passed the Honours degree examination, preliminary or final, as the case may be, obtaining the following minimum percentage of marks:—

Compulsory English	..	35 per cent.
Second Language	..	35 per cent.
Minor Subject	..	60 per cent.
Major Subject	..	40 per cent. with the prescribed minima for groups, if any;

provided that a candidate for the B.Sc. degree examination shall be required to undergo the course for, and the examination in, the second paper of Compulsory English.

(b) A candidate appearing for the B.A. or B.Sc. degree examination as above shall be granted exemption from attendance only (but not from examination) in respect of the subject of the B.A. or B.Sc. degree examination in which he shall have undergone the Honours course, but not passed in the examination as prescribed in the preceding clause (a), provided that a candidate who shall have secured in the Honours examination in the major subject less than 30 per cent. of the marks shall not be exempted from attendance in the corresponding subject.

(v) The classification of successful candidates shall be regulated according to Ordinance 76.

MASTER'S DEGREE

88. (a) *Master of Arts*.—A candidate for the degree of Master of Arts shall pursue a course of study in one of the following subjects:—

Course. English, Kannada, Sanskrit, Persian, Urdu, History, Economics, Philosophy, Mathematics.

(b) *Master of Science*.—A candidate for the degree of Master of Science shall pursue a course of study in one of the following subjects:—

Mathematics, Physics, Chemistry, Botany, Zoology, Geology, Psychology, Economics.

89. Honours graduates of this University and those of other Universities possessing qualifications considered equivalent by the University Council shall be eligible for admission to the course.

90. An Honours graduate shall pursue a course of studies in his major subject for not less than one academical year after passing the Bachelor's Degree Examination, at the end of which he will be permitted to present himself for the Master's Degree Examination in that subject.

91. The examination for the Master's Degree shall consist of four papers and a *viva voce* examination, or a thesis and a *viva voce* examination.

Scheme of examination. The written papers and the *viva voce* shall carry a maximum of 100 marks each, and the thesis shall carry a maximum of 400 marks.

No candidate shall be declared to have passed the Master's Degree Examination unless he obtains not less than 40 per cent. of the marks in the thesis when a thesis is offered, 40 per cent. of the marks in the aggregate of the written papers, 40 per cent. of the marks in the *viva voce* examination and 50 per cent. of the aggregate marks for the whole examination. Successful candidates who obtain 60 per cent. of the total marks shall be placed in the first class in order of merit, and the other successful candidates in the second class in alphabetical order.

B.T. DEGREE

92. A candidate for the degree of Bachelor of Teaching shall have taken the Bachelor's Degree in Arts, Science or Commerce in this University or a corresponding degree of any other University accepted by the University Council as equivalent thereto, and have attended for a year the prescribed course of study in this

University after having passed the B.A., B.Sc., or B.COM. Degree Examination.

93. The course of study for the degree of Bachelor of Teaching shall extend over one year at the conclusion of which there shall be an examination comprising the subjects mentioned below:—

Course of study.	Marks
GROUP A. <i>Theoretical</i>—	
(i) Principles	150
(ii) Educational Psychology including Mental and Educational Measurements	150
(iii) Methods	150
(iv) Comparative Study of Educational Systems with special reference to problems of Indian Education.	150
(v) School Organisation and Management	150
TOTAL, PAPERS	750
Class Records in Mental and Educational Measurements.	50
TOTAL, Group A	800
GROUP B. <i>Practice in Teaching</i>—	
Examination	140
Class work	60
TOTAL, Group B	200

Note 1.—No separate minimum will be required regarding class records in respect of Mental and Educational Measurements, the marks in which will count towards the aggregate in Group A.

Note 2.—The course in respect of “Methods” under Group A and of “Practice in Teaching” under Group B shall comprise—

- (i) the teaching of English Compulsory,
- (ii) the teaching of *one* of the following subjects:
English Optional, History, Geography, Mathematics, Science.

This note will be effective from the academical year 1938–39. The following note will be in force till then:—

Note 2.—The course on respect of “Methods” under Group A and of “Practice in Teaching” under Group B shall comprise—

- (1) the teaching of English;
- (2) the teaching of one of the following subjects:
History, Geography, Mathematics, Science.

94. Candidates for the B.T. Degree Examination who have passed in Group A (Theoretical) and failed in Group B (Practice in Teaching) shall be permitted to appear again for Group B (Practice in Teaching).

Compartmentments.

95. No candidate shall be declared to have passed the B.T. Degree Examination, unless he obtains not less than 40 per cent. of the total marks under A and B separately with a minimum of 30 per cent. in each subject of Group A. Of passed candidates, those that obtain 60 per cent. or more of the total marks shall be placed in order of merit in the first class, others obtaining not less than 50 per cent. in the second class likewise in order of merit, and the rest in the third class in alphabetical order :

Provided that the names of candidates who pass in Groups A and B in different years shall be published in a separate list in alphabetical order.

B.E. DEGREE

96. Students who have passed the Intermediate Examination in Science of this University with Physics, Chemistry and Mathematics as optional subjects shall be eligible for admission to the course of studies leading to the degree of Bachelor of Engineering. Students who have passed the B.Sc. Degree Examination with Physics, Chemistry and Mathematics as optional subjects, or the B.Sc. (HONS.) Degree Examination with Mathematics, Physics or Chemistry as the major subject, shall also be eligible for admission, provided that those with Chemistry as major subject shall have taken Mathematics as an optional subject in the Intermediate course. Admission of students from other Universities with similar qualifications shall be subject to the approval of the University Council in each case.

97. The course shall extend over four years followed by a year's practical training. A student shall be considered to have completed a year's course at the College of Engineering, if he has attended not less than three-fourths of the number of working periods in each of the subjects comprised in the course during the said year and his conduct and progress have been satisfactory.

The first year course shall be common to all the branches.

98. Candidates for the B.E. Degree shall be required to attend courses of study in the following subjects:—

Course of study.

First Year

COMMON COURSE

(Civil, Mechanical, Electrical and Chemical Engineering)

1. Mathematics (Algebra, Trigonometry, Analytical Geometry and Elements of Differential and Integral Calculus).

2. Engineering Physics—Theory and Practice.
3. Engineering Chemistry—Theory and Practice.
4. Economics.
5. Building Materials.
6. Metallurgy and Elementary Mechanical Engineering.
7. Freehand Model and Geometrical Drawing.
8. Surveying—Theory and Practice.
9. Workshop—Practice.

Second Year

(i) CIVIL

1. Mathematics.
2. Applied Mechanics.
3. Hydraulics.
4. Mechanical Engineering.
5. Electrical Engineering.
6. Machine Drawing.
7. Geology—Theory and Practice.
8. Workshop—Theory and Practice.
9. Applied Mechanics Laboratory.
10. Mechanical Laboratory.
11. Electrical Laboratory.
12. Survey Practice.

(ii) MECHANICAL

1. Mathematics.
2. Applied Mechanics.
3. Hydraulics.
4. Civil Engineering.
5. Electrical Technology.
6. Machine Drawing.
7. Building Drawing.
8. Machine Design.
9. Applied Mechanics Laboratory.
10. Workshop—Theory and Practice.
11. Surveying—Theory and Practice.

(iii) ELECTRICAL

1. Mathematics.
2. Applied Mechanics.
3. Hydraulics.
4. Civil Engineering.
5. Electrical Technology.
6. Machine Drawing.
7. Building Drawing.
8. Machine Design.
9. Applied Mechanics Laboratory.
10. Workshop—Theory and Practice.
11. Surveying—Theory and Practice.

(iv) CHEMICAL ENGINEERING

- *1. Pure Mathematics. Same as for Civil, Mechanical and Electrical.
- 2. Applied Mechanics. Same as for Civil, Mechanical and Electrical.
- *3. Hydraulics. Same as for Civil, Mechanical and Electrical.
- *4. Theory and Design of Machine Parts as for Mechanical and Electrical.
- *5. Civil Engineering as for Mechanical and Electrical.
- *6. Electrical Technology as for Mechanical and Electrical.
- 7. Machine Drawing.
- *8. Workshop and Laboratory.

Third Year

(i) CIVIL

- 1. Mathematics.
- 2. Applied Mechanics and Graphic Statics.
- 3. Building Construction.
- 4. Architecture.
- 5. Building Drawing and Estimating.
- 6. Irrigation.
- 7. Sanitary Engineering.
- 8. Surveying—Theory and Practice.

(ii) MECHANICAL

- 1. Mathematics.
- 2. Applied Mechanics and Graphic Statics.
- 3. Theory of Direct Current Machinery.
- 4. Heat Engines.
- 5. Workshop Theory.
- 6. Machine Design.
- 7. Machine Drawing.
- 8. Workshop Practice.
- 9. Mechanical Laboratory.
- 10. Electrical Laboratory and Drawing.

(iii) ELECTRICAL

- 1. Mathematics.
- 2. Applied Mechanics and Graphic Statics.
- 3. Heat Engines.
- 4. Theory of Direct Current Machinery.
- 5. Hydraulic Machinery.
- 6. Machine Drawing.
- 7. Electrical Drawing.

* Examination in these subjects.

8. Workshop—Theory and Practice.
9. Mechanical Laboratory.
10. Electrical Laboratory.

(iv) CHEMICAL ENGINEERING

- *1. Applied Mechanics, Graphic Statics. Same as for Civil, Mechanical and Electrical.
- *2. Applied Thermodynamics.
- *3. D.C. Machines as for Mechanical and Electrical.
- *4. Machine Drawing.
- *5. Advanced Chemistry.
- *6. Organic Chemistry.
- *7. Electrical Laboratory.
- *8. Mechanical Laboratory.
9. Chemical Laboratory.

Fourth Year

(i) CIVIL

1. Irrigation and Irrigation Drawing.
2. Railways, Tunnels and Harbours.
3. Roads and Bridges, and Bridge Drawing.
4. Water Supply and Sanitary Engineering.
5. Structural Design and Drawing.
6. Testing of Materials Laboratory.
7. Hydraulics Laboratory.
8. Estimating, Specification and Engineering Economics.
9. Surveying—Theory and Practice.

(ii) MECHANICAL

1. Heat Engines.
2. Hydraulic Engineering.
3. Power Plant Engineering and Drawing.
4. Mechanical Laboratory.
5. Workshop—Practice.
6. Theory and Design of Machines.
7. Estimating, Specification and Engineering Economics.
8. Machine Drawing.
9. Theory of Alternating Current Machinery.
10. Electrical Laboratory.
11. Structural Design.

(iii) ELECTRICAL

1. Theory of Alternating Current Machinery.
2. Generation and Hydro-Electric Engineering.
3. Transmission and Distribution.
4. Electrical Machine Design.

* Examination in these subjects.

5. Estimating, Specification and Engineering Economics.
6. Traction and Utilisation.
7. Structural Design.
8. Mechanical Laboratory.
9. Electrical Laboratory.
10. Electrical Drawing.

(iv) CHEMICAL ENGINEERING

- *1. Hydraulic Machinery as for Mechanical, with special reference to pumping plant.
- *2. Structural Design. Same as for Mechanical and Electrical.
- *3. Mechanical Laboratory.
- *4. Applied Organic Chemistry.
- *5. Chemical Engineering.
- *6. Chemical Engineering Laboratory.
- *7. Construction and Design of Chemical Plants.
- *8. Economics of Chemical Industry.
- *9. Treatment of materials, grinding, evaporate, etc.

Note.—Instruction in Photography and Physical Culture will be given as part of the course.

99. Candidates shall be required to pass four examinations, viz., the First Examination in Engineering at the end of the first year, the Second Examination in Engineering at the end of the second year, the Third Examination in Engineering at the end of the third year and the Final Examination for the B.E. Degree at the end of the fourth year.

No candidate shall be permitted to appear for the First Examination in Engineering after having failed three times in the examination.

Note.—A candidate not successful in the Second Examination in Engineering under the old scheme in 1941 or in any preceding year, shall be required in any subsequent year to appear for the Second and Third Examinations in Engineering under the new scheme, subject to the conditions of Ordinance 54 regarding break of continuity.

100. No candidate shall be declared to have passed any of the above examinations unless he obtains not less than 30 per cent. of the marks in each paper of the written examination, 30 per cent. of the marks in each oral or practical examination, 40 per cent. of the marks in each group and 50 per cent. of the total marks in the examination.

Successful candidates who obtain not less than 70 per cent. of the total marks shall be placed in the First Class and their names shall be published in order of merit; the names of the other successful candidates shall be published in alphabetical order in the Second Class.

* Examination in these subjects.

A candidate for any of the examinations failing to obtain the prescribed minimum in only one paper but obtaining all the other requisite minima (including 50 per cent. in the aggregate), may be permitted to appear again for the examination in that paper only and that he be declared to have passed in the examination provided he obtains not less than 40 per cent. of the marks in that paper at the subsequent appearance.

A candidate for the First, Second, or Third Examination in Engineering who fails in only one paper and is permitted under the preceding clause to appear only in that paper at a subsequent examination may be allowed to proceed to the second, third or fourth year class as the case may be, and take the examination in the paper failed in along with the Second or Third or Final Examination. His result in the Second, Third or Final Examination shall be declared only after he passes in the First, Second or Third Examination as the case may be.

101. Candidates for the First Examination in Engineering shall be required to produce a certificate of having completed the First Examination. first year's course in the College of Engineering. †Only those who are successful in this examination shall be allowed to proceed to the second year's course.

***102.** Candidates for the Second Examination in Engineering shall be required to produce a certificate of having completed the second and third year's course in the College of Engineering. †Only those who are successful in this examination shall be allowed to proceed to the final year course.

103. Candidates for the Final Examination in Engineering shall be required to produce a certificate of having completed the fourth year's course in the College of Engineering. Only those who have passed in this examination and have also undergone one year's practical training after completing the entire four years' course as approved by the University Council shall be eligible for the B.E. Degree:

Provided that in respect of passed Mechanical Engineering students, not less than six months of the one year of practical training should be in Mechanical Engineering and the rest in Electrical Engineering and that in respect of passed Electrical Engineering students, not less than six months of the one year of practical training should be in Electrical Engineering and the rest in Mechanical Engineering.

* In line 3 of Ordinance 102, omit the words "and third". Add the following as Ordinance 102 A :—

102A. Candidates for the Third Examination in Engineering shall be required to produce a certificate of having completed the third year's course in the College of Engineering.

† Omit this sentence.

103 A. A candidate who has passed the Final Examination for the B.E. Degree in the Mechanical or Electrical Engineering branch may be permitted to qualify for the degree also in the Electrical or Mechanical Engineering branch, as the case may be, by attending the course of lectures for a period of not less than one academical year and passing an examination in the subjects studied as specified hereunder:—

(1) Mechanical Engineering students qualifying for an additional degree in Electrical Engineering shall undergo a course of studies in the subjects comprised in items 13 and 15 of the III Year Electrical Engineering course and items 2 to 6, 9 and 10 of the IV Year Electrical Engineering course and take the papers comprised in item 15 of the Second Examination in Engineering (Electrical), and Groups I and II of the Final Examination in Engineering (Electrical) except item 6.

(2) Electrical Engineering students qualifying for an additional degree in Mechanical Engineering shall undergo a course of studies in the subjects comprised in items 8 and 9 of the III Year Mechanical Engineering course and items 1 to 8 of the IV Year Mechanical Engineering course and take the papers comprised in items 12 and 13 of the Second Examination in Engineering (Mechanical), and Groups I and II of the Final Examination in Engineering (Mechanical).

103 B. The minima for a pass in the examination shall be the same as those prescribed in Ordinance 100. Successful candidates securing not less than 70 per cent. of the aggregate marks in the examination shall be considered to have obtained distinction in the additional branch.

103 C. Candidates who have passed in the examination as above shall, if they have not already taken their degree in the first branch, be required to undergo a year's practical training in approved engineering works specially suited for imparting practical training in both the branches, before they become eligible for the degree in Mechanical and Electrical Engineering. Successful candidates who have already taken the degree in the first branch shall each have an endorsement made upon his diploma setting forth the further examination passed by him with date and class, if any, under proper authority.

THE PRE-MEDICAL COURSE

104. Before proceeding to the course of studies leading to the degree of Bachelor of Medicine and Bachelor of Surgery, a student shall be required to complete successfully the Pre-Medical Course which shall extend over a period of six months and comprise the following subjects of study:—

Physics, Chemistry, Botany and Zoology.

105. Students who have passed the Intermediate Examination of this University with not fewer than two of the subjects comprised in the above course shall be eligible for admission to the course. Such of these as may have passed in Part III of the Bachelor's Degree Examination of this University with one or more of the subjects comprised in the course shall be exempted from study and examination in the subject or subjects in which they have already passed the degree examination.

Admission of students from other Universities with similar qualifications shall be subject to the approval of the University Council in each case.

Candidates who hold the L.M.P. Diploma of Mysore or a qualification considered equivalent thereto shall also be eligible for admission to the course not later than two* years after passing the Final L.M.P. Diploma Examination.

106. There shall be a Pre-Medical Examination at the end of the course. The examination shall comprise a written paper, a practical examination and a *viva voce* examination in each subject of study.

Pre-Medical Examination.

107. Candidates for the examination shall be required to produce certificates of (i) having undergone the prescribed course of study for six months in the Medical College in the subjects in which they appear, (ii) being not less than 18 years of age on the 1st January following the examination.

No candidate shall be permitted to appear for the Pre-Medical Examination after having failed twice in the examination.

108. No candidate shall be declared to have passed the examination unless he obtains in each subject not less than 35 per cent. of the marks in the written examination and 35 per cent. of the marks in the practical and the *viva voce* examination taken together and 50 per cent. of the aggregate marks in the examination.

Successful candidates who obtain not less than 70 per cent. of the maximum marks shall be placed in the First Class and their names shall be published in order of merit. The names of the other successful candidates shall be published in alphabetical order in the Second Class.

* *Note.*—As a transitory measure during the years 1939, 1940 and 1941, the condition regarding the limit of two years may be relaxed in respect of those who might have passed the Final Examination more than two years prior to the date of admission, subject to the condition that the Principal of the Medical College shall be satisfied as regards the merit of the candidate seeking admission.

Provided that the names of successful candidates who have been exempted in one or more subjects shall be published in a separate list in alphabetical order.

M.B.B.S. DEGREE

109. The course of studies leading to the degree of Bachelor of Medicine and Bachelor of Surgery shall extend over five years.

110. (i) Candidates who have passed the Pre-Medical Examination of this University or who possess similar qualifications of other Universities which are accepted by the University Council as sufficient for this purpose, shall be eligible for admission to the course.

(ii) A candidate for admission must be not less than 18 years of age on the 1st January of the calendar year of admission.

111. Candidates for the degree shall be required to attend courses of study in the following subjects:—
Courses of study.

First Year

Anatomy (including Embryology).—One course of lectures in Osteology and Dissection.

Physiology (including Practical Physiology and Bio-Chemistry).—One course of lectures in Physiology and one course of practical work.

Organic Chemistry.—One course of lectures with practical work.

Second Year

Anatomy (including Embryology).—One course of lectures with practical work.

Physiology (including Practical Physiology and Bio-Chemistry).—One course of lectures with practical work and a course of practical work.

Organic Chemistry.—One course of lectures with practical work.

Third Year

Pathology and Bacteriology (including Immunology).—One course of lectures with practical work.

Minor Surgery.—One course of lectures and practical work.

Materia Medica and Pharmacology.—One course of lectures with a practical course of instruction in pharmacy.

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Hospital and Clinical Work.—Post-mortem for three months, out-patient department for three months, surgical wards for three months, medical wards for three months.

Fourth Year

Medicine.—One course of lectures.

Surgery and Surgical Pathology.—One course of lectures.

Venereal Diseases.—One course of lectures and practical work.

Midwifery, Gynæcology and Pædiatrics.—One course of lectures in midwifery and diseases of women and new-born children.

Ophthalmology.—One course of lectures.

Forensic Medicine.—One course of lectures.

Pathology and Bacteriology (including Immunology.)—One course of lectures with practical work.

Hygiene.—One course of lectures and one course of practical work.

Hospital and Clinical Work.—Medical wards for 2½ months, surgical wards for 2½ months, maternity wards for 2 months, ophthalmic wards for 3 months.

Fifth Year

Operative Surgery.—One course of practical instruction.

Midwifery, Gynæcology and Pædiatrics.—A continuation course in midwifery and diseases of women and new-born children.

Mental Diseases.—One course of lectures and demonstrations.

Hospital and Clinical Work.—Out-patient department for three months, surgical wards for three months, medical wards for three months, and maternity wards for two months.

Vaccination.—Ten demonstrations.

Fever Hospital.—One month.

Clinical and Dental Surgery.—One course of twelve lectures with necessary demonstrations.

Anæsthetics.—Instructions in anæsthetics consisting of attendance at three lectures and the personal administration of anæsthetics in six cases.

Oto-rhino-laryngology.—One course of lectures and demonstrations:

Provided that in respect of candidates who have passed the final examination for the L.M.P. Diploma, the course shall extend over three years and shall comprise the following:—

First Year

Anatomy (including Embryology).—One course of lectures with dissections.

Physiology (including Practical Physiology and Bio-Chemistry).—One course of lectures with practical work.

Organic Chemistry.—One course of lectures with practical work.

Second Year

Pathology and Bacteriology.—One course of lectures with practical work.

Hygiene.—One course of lectures with practical work.

Ophthalmology.—One course of lectures.

Forensic Medicine.—One course of lectures.

Minor Surgery.—One course of lectures with practical work.

Materia Medica and Pharmacology.—One course of lectures with a practical course of instruction in pharmacy.

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Hospital and Clinical Work.—Post-mortem for three months, surgical wards for three months, medical wards for three months, out-patient department for three months.

Third Year

Medicine.—One course of lectures.

Surgery and Surgical Pathology.—One course of lectures.

Venereal Diseases.—One course of lectures and practical work.

Midwifery, Gynæcology and Pædiatrics.—One course of lectures in Midwifery and diseases of women and new-born children.

Hospital and Clinical Work.—Medical wards for three months, surgical wards for three months, maternity wards for two months, ophthalmic wards for two months, out-patient department for one month.

Operative Surgery.—One course of practical instruction.

Mental Diseases.—One course of lectures and demonstrations.

Vaccination.—Ten demonstrations.

Fever Hospital.—One month.

Clinical and Dental Surgery.—One course of twelve lectures with necessary demonstrations.

Anæsthetics.—Instruction in anæsthetics consisting of attendance at three lectures and the personal administration of anæsthetics in six cases.

Oto-rhino-laryngology.—One course of lectures and demonstrations.

112. Candidates shall be required to pass three examinations, namely, the First Examination at the end of the second year of the course, the Second Examination comprising three parts—Part I to be taken at the end of the third year, Parts II and III to be taken at the end of the fourth year, and the Final Examination to be taken at the end of the fifth year, it being permissible (a) for a candidate failing in Part I at the end of the third year to proceed to the fourth year course and appear for Part I again at the end of the fourth year, and (b) for a candidate failing in Part III

of the Second Examination at the end of the fourth year to proceed to the fifth year course and appear for Part III of the Second Examination at the end of the fifth year :

Provided that a candidate who has already passed the Final Examination for the L.M.P. Diploma shall be permitted to appear for the First M.B.B.S. Examination at the end of a course of one academical year after passing the Pre-Medical Examination, the Second M.B.B.S. Examination at the end of a course of one academical year after passing the First M.B.B.S. Examination and the Final Examination at the end of a course of one academical year after passing the Second M.B.B.S. Examination.

No candidate shall be permitted to appear for the First Examination after having failed three times in the examination.

The Final Examination and Part III of the Second Examination shall be held twice a year in December and in June, respectively.

113. (a) Candidates for the First Examination shall be required to produce certificates of—

First M.B.B.S. Examination—certificates required.

(i) having passed the Pre-Medical Examination;

(ii) having subsequent to passing the Pre-Medical Examination undergone an approved course of studies in the Medical College for a period of not less than two years in Anatomy, Physiology and Organic Chemistry;

(iii) having undergone a course of dissections extending over not less than 18 months and of having dissected the whole body at least once to the satisfaction of their teachers;

(iv) having undergone a practical course of Histology for at least three months;

(v) having undergone an approved course of Practical Physiology including Bio-Chemistry for a period of at least nine months.

(b) Candidates shall be examined in the following subjects:—

First M.B.B.S. papers.

(i) Anatomy (including Embryology).

(ii) Physiology (including Practical Physiology and Bio-Chemistry).

(iii) Organic Chemistry.

(c) No candidate shall be declared to have passed the examination, unless he obtains not less than 50 per cent. of the marks in the written examination and 50 per cent. in the practical and oral examination together in Anatomy and in Physiology, and 35 per cent. in the written examination and 35 per cent. in the practical and oral examination together in Organic Chemistry, and 50 per cent. in the total for that subject. Successful candidates who obtain 70 per cent. of the total number of marks shall be placed in the First Class in order of merit. The other successful

candidates shall be placed in the Second Class in alphabetical order.

A candidate who fails in the examination but obtains not less than 55 per cent. of the total maximum marks in any subject and also the minimum in each division of that subject, shall be exempted from appearing for the examination in the subject again during the succeeding two years.

Names of successful candidates who have thus been exempted in one or more subjects shall be published in a separate list in alphabetical order.

(d) A candidate who fails in the examination shall, while appearing for the examination again in the subject or subjects in which he has not been exempted, be required to produce evidence of having attended a further course of studies in the second year class for a period of not less than one academical year.

114. (a) Candidates for the Second Examination shall be required to produce certificates of—

Second M.B.B.S. Examination—certificates required. (i) having passed the First M.B.B.S. Examination;

(ii) having been engaged in medical studies in the Medical College subsequent to passing the First M.B.B.S. Examination as under:—

Pharmacology	1 year
Pathology including Bacteriology ..	2 years
Hygiene	1 year
Ophthalmology	1 year
Forensic Medicine	1 year

the period being one year in respect of each subject in the case of L.M.P. Diploma holders;

(iii) having undergone a course of lectures and demonstrations in Pathology and Bacteriology including Immunology;

(iv) having undergone a course of Practical Pathology (Chemical and Histological) for three months;

(v) having undergone a course of lectures and demonstrations in Hygiene;

(vi) having worked as clinical clerk for three months in the medical wards of the Krishnarajendra Hospital or the Victoria Hospital;

(vii) having worked as a clinical clerk for three months in the surgical wards of the Krishnarajendra Hospital or the Victoria Hospital;

(viii) having worked as a clinical clerk for three months in the out-patient department of the Krishnarajendra Hospital or the Victoria Hospital;

(ix) having acted as clerk for post-mortem examinations for three months and of having learnt the method of post-mortem examination;

- (x) having attended a course of Minor Surgery;
- (xi) having undergone a course of Materia Medica and Pharmacology;
- (xii) having undergone a course of Practical Pharmacy;
- (xiii) having attended a complete course of lectures in Forensic Medicine;
- (xiv) having attended a complete course of lectures in Ophthalmology;
- (xv) having worked as a clinical clerk in the Ophthalmic Department of the Krishnarajendra Hospital or in the Minto Ophthalmic Hospital for a period of three months and of having learnt refraction work and the use of the ophthalmoscope.

(b) The Second Examination shall be held in three parts:

Part I—at the end of the third year comprising Pharmacology.

Part II—at the end of the fourth year comprising Pathology including Bacteriology and Hygiene.

Part III—at the end of the fourth year comprising Ophthalmology and Forensic Medicine.

Note.—Failure in Part I at the end of the third year shall not disqualify for promotion to the fourth year class.

Part III may be taken at the end of the fourth year or the fifth year, provided that failure in the part taken at the end of the fourth year shall not disqualify for promotion to the fifth year class.

Pass in Parts I and II shall be compulsory before proceeding to the fifth year class.

(c) No candidate shall be declared to have passed in Part I unless he obtains not less than 50 per cent. of the aggregate marks in the subject. Successful candidates who obtain 70 per cent. of the total marks shall be placed in the First Class in order of merit and the other successful candidates in the Second Class in alphabetical order.

No candidate shall be declared to have passed in Part II unless he obtains not less than 50 per cent. of the aggregate marks in each subject. Successful candidates who obtain 70 per cent. of the total marks in the part shall be placed in the First Class in order of merit and the other successful candidates in the Second Class in alphabetical order.

No candidate shall be declared to have passed in Part III of the examination unless he obtains not less than 50 per cent. of the marks in each subject. Successful candidates who obtain 70 per cent. of the total marks shall be placed in the First Class in order of merit and the other successful candidates in the Second Class in alphabetical order.

A candidate who fails in Part II or Part III of the examination but obtains not less than 55 per cent. of the total maximum marks in either subject of the part shall be exempted from

appearing for the examination in the subject again during the succeeding two years.

Names of successful candidates who have thus been exempted in a subject of a part shall be published in a separate list in alphabetical order.

(d) A candidate who fails in Part I of the examination shall, while appearing for the examination again, produce evidence of having attended a further course of study for a period of not less than one academical year, except that in respect of a candidate failing in Part I at the end of the third year and appearing for the part at the end of the fourth year together with Part II or Parts II and III, further attendance shall not be compulsory.

A candidate who fails in Part II and has not been exempted from appearing again in Pathology shall be required to produce evidence of having attended a further course of study in Pathology for a period of not less than one academical year, a further course in Hygiene being optional.

A candidate who fails in Part III and has not been exempted from appearing again in Ophthalmology shall be required to produce evidence of having attended a further course of study in Ophthalmology, further attendance in Forensic Medicine being optional, except that in respect of a candidate failing in Part III at the end of the fourth year and appearing for the part at the end of the fifth year together with the Final Examination, further attendance in respect of Part III shall not be compulsory.

115. (a) Candidates for the Final Examination shall be required to produce certificates of—

Final M.B.B.S. Examination — certificates required. (i) having passed Parts I and II of the Second M.B.B.S. Examination;

(ii) having been engaged in medical studies in the Medical College in the subjects of the examination for a period of not less than three years after passing the First M.B.B.S. Examination and not less than one year after passing Parts I and II of the Second M.B.B.S. Examination, and in the case of those who have passed the L.M.P. Diploma Examination for not less than one year after passing the Second M.B.B.S. Examination;

(iii) having attended a complete course of lectures in Medicine including Therapeutics and Pædiatrics;

(iv) having attended a complete course of lectures in Surgery;

(v) having attended a complete course of lectures in Obstetrics and Gynæcology;

(vi) having worked as a clinical clerk in the medical wards of the Krishnarajendra Hospital or the Victoria Hospital for a period of 5½ months and of having attended lectures and demonstrations in Clinical Medicine during that period.

(vii) having worked as a clinical clerk in the surgical wards of the Krishnarajendra Hospital or the Victoria Hospital for a period of 5½ months and of having attended lectures and demonstrations in Clinical Surgery during that period;

(viii) having worked in the out-patient department of the Krishnarajendra Hospital or the Victoria Hospital for three months;

(ix) having worked as a clinical clerk in the wards of the Vani Vilas Hospital or of the Maternity Hospital for a period of four months and of having attended on 5 labours under supervision, of having conducted 15 labours independently and of having attended an ante-natal clinic for two months;

(x) having attended a course of lectures on Oto-rhino-laryngology for three months;

(xi) having attended a practical course of Operative Surgery for three months;

(xii) having attended a course of lectures on Anæsthetics and of having administered anæsthesia in six cases;

(xiii) having attended a course of lectures and demonstrations on Mental Diseases;

(xiv) having attended a course of ten lectures and demonstrations on Vaccination;

(xv) having attended a Fever Hospital for one month;

(xvi) having attended a course of lectures with practical instruction for three months in Venereal Diseases and having satisfactorily undergone a test in the same.

(b) Candidates shall be examined in the following subjects:—

(i) Medicine including Therapeutics and Pædiatrics.

(ii) Surgery including Venereal Diseases.

(iii) Obstetrics and Gynæcology.

(c) No candidate shall be declared to have passed the Final Examination unless he obtains not less than 50 per cent. of the maximum marks in the written examination and not less than 50 per cent. of the maximum marks in the clinical, practical and *viva voce* examinations taken together, in each subject. Successful candidates who obtain not less than 70 per cent. of the total marks in the examination shall be placed in the First Class in order of merit and the other successful candidates in the Second Class in alphabetical order.

A candidate who fails in the examination but obtains not less than 55 per cent. of the total maximum marks in any subject and also the minimum in each division of that subject shall be exempted from appearing for the examination in the subject again during the succeeding two years.

Names of successful candidates who have thus been exempted in one or more subjects shall be published in a separate list in alphabetical order.

(d) A candidate who fails in the examination shall be required at each subsequent appearance to produce evidence of further study in the subject or subjects in which he appears at a subsequent examination.

DIPLOMA COURSES

DIPLOMA IN MEDICAL PRACTICE

116. *Deleted.*

117. The course of studies for the diploma of Licensed Medical Practitioner shall extend over four years.
Length of course.

118. (a) Candidates who have passed the Mysore Secondary School Leaving Certificate Examination and been declared eligible for college courses of study or who have passed any other examination accepted by the University Council as sufficient for this purpose, shall be eligible for admission.
Qualification for admission.

(b) Candidates for admission should be not less than 16 years of age on the first July of the year of admission.

(c) Such of the candidates for any of the M.B.B.S. Degree Examinations of this University as secure not less than 40 per cent. of the aggregate marks in each subject comprised in the examination may be admitted to the corresponding higher class of the L.M.P. Diploma course, the correspondence being as follows:—

First Examination for M.B.B.S. Third L.M.P. class

Second Examination for M.B.B.S. Final L.M.P. class

A candidate, failing in the First M.B.B.S. or the Second M.B.B.S. examination, and not eligible for admission to the Third or Final L.M.P. class in accordance with the above clause, may be admitted to the Second or the Third Year L.M.P. class, as the case may be, on the same conditions as a candidate failing in the Second or Third L.M.P. examination.

(d) A candidate failing in the Final Examination for the M.B.B.S. Degree may be admitted to the Final Year L.M.P. class on the same conditions as a candidate failing in the Final Examination for the L.M.P. Diploma.

119. Candidates for the Diploma of Licensed Medical Practitioner shall be required to attend the following courses of study:—
Courses of study.

First Year

Physics.—One course of lectures with practical demonstrations.

Chemistry.—One course of lectures with practical demonstrations.

Elements of Biology.—One course of lectures with practical demonstrations.

Anatomy.—One course of lectures and dissections.

Physiology.—One course of lectures.

Such of the students admitted to the first year class as have passed in the optional group of a degree examination of this University comprising any of the above subjects or other examinations which may be accepted by the University Council as adequate for the purpose, may be exempted by the University Council from attendance and examination in such subject or subjects.

Second Year

Anatomy.—One course of lectures with dissections.

Physiology.—One course of lectures with demonstrations in Chemical Physiology and Histology.

Third Year

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Pathology and Bacteriology.—One course of lectures with practical work.

Hygiene.—One course of lectures.

Materia Medica.—One course of lectures and practical Pharmacy.

Mental Diseases.—One course of lectures.

Hospital Work.—(a) Clinical work in the medical wards of a recognised hospital for four months including post-mortem clerking during the same period.

(b) Clinical work in the surgical wards for four months.

(c) Out-patient hospital practice for two months.

(d) Clinical demonstrations at the Mental Hospital during the short term.

(e) A course of five clinical demonstrations at the Epidemic Diseases Hospital.

Fourth Year

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Venereal Diseases.—One course of lectures and practical work.

Operative Surgery, Throat, Nose and Ear Diseases.—One course of lectures.

Midwifery.—One course of lectures.

Diseases of Women and Children.—One course of lectures.

Ophthalmology.—A course of lectures extending over four months.

Forensic Medicine.—One course of lectures and practical demonstrations in Toxicology.

Hospital Work.—(a) Clinical work in the medical wards of a recognised hospital for two months.

(b) Clinical work in the surgical wards for two months.

(c) Out-patient hospital practice for one month.

(d) Clinical work at the Ophthalmic Hospital for three months.

(e) Clinical work at the Maternity Hospital for three months.

(f) A course of five demonstrations in Vaccination.

119 A. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during two consecutive terms and his progress and conduct have been satisfactory.

119 B. A candidate who fails in any examination or having completed the course for any examination does not appear for the examination immediately and appears for the examination in a subsequent year shall be considered to have undergone a further course for purposes of Ordinance 126, if he has attended not less than 80 per cent. of the working periods in each of the subjects in which attendance is necessary, for at least one term immediately preceding the examination for which he appears.

120. Candidates shall be required to pass four examinations, viz., the first, the second, the third and the final. These examinations shall be held twice a year in March and in September.

No candidate shall be permitted to appear for the First Examination for the L.M.P. Diploma after having failed three times in the examination.

121. (a) Candidates for the First L.M.P. Examination shall be required to produce certificates of having undergone an approved course of instruction for one year in Physics, Chemistry, Elements of Biology, Anatomy, and Physiology.

(b) Candidates shall be examined in the following subjects:—

(i) Physics.

(ii) Chemistry.

(iii) Elements of Biology.

122. (a) Candidates for the Second L.M.P. Examination shall be required to produce certificates of—

(i) having passed the First L.M.P. Examination;

(ii) having subsequently been engaged in medical studies extending over one academical year;

(iii) having undergone a further course of lectures in Human Anatomy;

(iv) having undergone a course of dissections extending over not less than twelve months and having dissected the whole body at least once to the satisfaction of their teacher;

(v) having undergone a further course of lectures in Physiology;

(b) Candidates shall be examined in the following subjects:—

(i) Anatomy.

(ii) Physiology.

123. (a) Candidates for the Third L.M.P. Examination shall be required to produce certificates of—

Third L. M.P. Examination; (i) having passed the Second L.M.P. Examination;

(ii) having subsequently been engaged in medical studies extending over one academical year;

(iii) having undergone a course of lectures and demonstrations in Pathology and Bacteriology;

(iv) having undergone a course of lectures and demonstrations in Hygiene;

(v) having undergone a course of lectures in Materia Medica and Pharmacology;

(vi) having undergone a course of Practical Pharmacy extending over a period of three months;

(vii) having attended a course of lectures in Medicine;

(viii) having attended a course of lectures in Surgery;

(ix) having attended a course of lectures in Mental Diseases;

(x) having worked as a clinical clerk in the medical wards of a recognised hospital for four months;

(xi) having worked as a clinical clerk in the surgical wards of a recognised hospital for four months;

(xii) having attended a course of clinical demonstrations at the Mental Hospital;

(xiii) having attended the out-patient hospital practice of a recognised hospital for two months;

(xiv) having worked as a clinical clerk in the post-mortem room.

(b) Candidates shall be examined in the following subjects:—

(i) Pathology and Bacteriology.

(ii) Hygiene.

(iii) Materia Medica.

124. (a) Candidates for the Final L.M.P. Examination shall be required to produce certificates of—

(i) having passed the Third L.M.P. Examination;
Final L.M.P. Examination.

(ii) having been engaged subsequently in medical studies extending over one academical year;

(iii) having attended a further course of lectures in Medicine;

(iv) having attended a further course of lectures in Surgery;

(v) having attended a course of lectures in Operative Surgery, and Throat, Nose and Ear Diseases;

(vi) having attended a course of lectures in Midwifery and diseases of women and children;

(vii) having attended a course of lectures in Ophthalmology;

(viii) having undergone a course of lectures and demonstrations in Forensic Medicine;

(ix) having worked as a clinical clerk in the medical wards of a recognised hospital for two months;

(x) having worked as a clinical clerk in the surgical wards of a recognised hospital for two months;

(xi) having worked in the out-patient department for one month;

(xii) having worked as a clinical clerk at the Ophthalmic Hospital for three months;

(xiii) having worked as a clinical clerk in the Maternity Hospital for three months and having conducted not less than six labour cases and witnessed not less than ten labour cases;

(xiv) having attended a course of demonstrations in Vaccination;

(xv) having attended a course of clinical demonstrations at the Epidemic Diseases Hospital;

(xvi) having attended a course of lectures with practical instructions for three months in venereal diseases and having satisfactorily undergone a test in the same.

(b) Candidates shall be examined in the following subjects:—

(i) Surgery.

(ii) Medicine.

(iii) Midwifery.

(iv) Forensic Medicine.

125. No candidate shall be declared to have passed in any of the above examinations unless he obtains not less than 40 per cent. of the marks in each subject. Of those who pass, those who obtain not less than 70 per cent. of the total marks shall be placed in the First Class in

order of merit and the rest in the Second Class in alphabetical order.

Candidates who fail in the Final Examination, but obtain 60 per cent. or more in any subject will be exempted from appearing in that subject at a subsequent examination:

Provided that the names of successful candidates who have been exempted in one or more subjects shall be published in a separate list in alphabetical order.

126. Candidates for the L.M.P. Examinations who fail shall be required to produce evidence of further study in the subjects in which they appear at a subsequent examination, a second course in Physics, Chemistry, Biology, Hygiene and Forensic Medicine being optional.

Further attendance
required in case of
failure.

AGRICULTURE

127. The course of study for the Diploma Course in Agriculture shall extend over three years.

Duration.

128. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Agriculture or Mathematics and Science as an optional subject and been declared eligible for admission to University courses of studies.

Admission.

129. The course of study shall comprise the following:—

Course.

First Year

Agricultural Geology	Elementary Botany
Climatology	Zoology
Physics	Engineering
Inorganic Chemistry	Drawing
Organic Chemistry	Veterinary Science

Second Year

Irrigation and Drainage	Economic Zoology
Farm Crops	Engineering
Live-stock and Dairying	Veterinary Science
Botany	Agricultural Chemistry
Mycology	

Third Year

Farm Crops	Agricultural Botany
Farm Economics	Agricultural Engineering
Live-stock	Veterinary Science

130. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

131. There shall be an examination at the end of each year in the following subjects:—

First Examination

Physics

Chemistry

Elementary Botany—Theory
Practical

**Zoology—Theory
Practical**

Drawing

Agriculture—Theory
Practical

Veterinary—Theory
Practical

Engineering Workshop—Practical

Second Examination

Entomology—Theory
Practical

Botany—Theory
Practical

Veterinary—Theory
Practical

Live-stock—Practical

**Mycology—Theory
Practical**

Agriculture—Part I
Part II
Practical

Engineering—Theory
Practical

Agricultural Chemistry

Final Examination

Agricultural Crops

Agricultural Economics

Live-stock—Theory
Practical

Agriculture—Practical
 Engineering—Theory
 Practical
 Agricultural Botany—Theory
 Practical
 Veterinary Science—Theory
 Practical

Only those who pass in the First and the Second Examinations shall be permitted to proceed to the second and the third year's course, respectively.

132. The minima for a pass shall be 40 per cent. of the marks in each subject other than Agriculture comprising both the written paper and the practical and *viva voce* examination, 50 per cent. in Agriculture and 50 per cent. in the aggregate. Successful candidates in the Final Examination obtaining not less than 60 per cent. of the aggregate marks in the examination shall be placed in the First Class in order of merit; the other successful candidates shall be placed in the Second Class in alphabetical order.

SERICULTURE

133. The course of study for the Diploma in Sericulture shall extend over three years.

Duration.

134. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Sericulture or Mathematics and Science as an optional subject and been declared eligible for admission to University courses of studies.

Admission.

135. The course of study shall be theoretical and practical and shall comprise the following:—

Course.

Mulberry Cultivation
 Rearing of Silkworms
 Seed Supply
 Manufacture of Raw Silk
 General Outline and Economics of Silk Industry.

Tours to important sericulture centres and farms and grainage shall form an integral part of the course.

136. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the

Attendance.

course during the year and his progress and conduct have been satisfactory.

137. There shall be two examinations—the Preliminary Examination at the end of the first year and the Final Examination at the end of the third year. Only those Examination. who pass in the Preliminary Examination shall be permitted to proceed to the second year's course.

The Preliminary Examination shall comprise four papers in theory only, namely:—

- (1) Mulberry Cultivation.
- (2) Rearing.
- (3) Seed Supply.
- (4) General.

The Final Examination shall comprise four papers in theory, two papers in practice and a *viva voce* examination:—

Theory	..	..	I—Rearing.
			II—Seed Production.
			III—Reeling.
			IV—General.
Practical	..	..	I—Grainage work.
			II—Reeling work.

138. The minima for a pass shall be 40 per cent. of the marks in each paper (theory or practical), 40 per cent. in the *viva voce* examination and 50 per cent. in the aggregate of each examination. Successful candidates in the examination obtaining not less than 60 per cent. of the marks in the Final Examination shall be placed in the First Class in order of merit, and the other successful candidates in the Second Class in alphabetical order.

VETERINARY SCIENCE

139. The course of study for the Diploma in Veterinary Science shall extend over three years.
Duration.

140. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Physics, Chemistry and Biology in the optional group and been declared eligible for admission to University courses of studies.
Admission.

141. The course of study shall comprise the following:—
Course.

First Year

1. Elements of Chemistry.
2. Elements of Physics.

3. Elements of Botany with special reference to poisonous and medicinal plants.
4. Elements of Zoology.
5. Animal Husbandry, Part I:
Handling of animals.
Principles of shoeing normal feet.
Recognition of breeds.
Conformation, etc.

Second Year

1. Anatomy of domestic animals and poultry.
2. Elementary physiology of domestic animals and poultry.
3. Pharmacology and Materia Medica.
4. Animal Husbandry, Part II:
General Hygiene.
Dietetics.
Dairy and Milk Hygiene.

Third Year

1. Minor Surgery of domestic animals and birds.
2. Medicine, including contagious, communicable, deficiency and parasitic diseases—special therapeutics.
3. Milk and meat inspection.
4. Animal Husbandry, Part III:
Genetics.

Note.—Practical courses will be arranged in the Veterinary Hospital, the Serum Institute and Government Farms.

142. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

143. There shall be an examination at the end of each year of the course.

Examination.

First Examination

- | | |
|---------------|-------------------------|
| 1. Chemistry. | 4. Zoology. |
| 2. Physics. | 5. Animal Husbandry, I. |
| 3. Botany. | |

Second Examination

1. Anatomy.
2. Physiology.
3. Pharmacology and Materia Medica.
4. Animal Husbandry, II.

Final Examination

- | | |
|--------------|---------------------------|
| 1. Surgery. | 3. Milk and Meat. |
| 2. Medicine. | 4. Animal Husbandry, III. |

Besides the written papers, there shall be a practical and oral examination in each subject. Only those who pass in the first and the second examination shall be permitted to proceed to the second and the third year's course respectively.

144. The minima for a pass shall be 40 per cent. in each subject (including both the written and the practical and the oral examinations) and 50 per cent. in the aggregate of each examination. Successful candidates in the Final Examination obtaining not less than 60 per cent. of the aggregate marks in the examination shall be placed in the First Class in order of merit, and the other successful candidates in the Second Class in alphabetical order.

CIVIL ENGINEERING

145. The course of study for the Diploma in Civil Engineering shall extend over three years followed by a year's practical training in a recognised work.

Duration.

146. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Mensuration, Surveying and Draughtsmanship as an optional subject and been declared eligible for admission to University courses of study, provided that those who have passed the S.S.L.C. Examination in the Mathematics and Science group shall be eligible for admission subject to the condition that they shall undergo a course in survey practice and mensuration during the first year and workshop practice during the long vacation at the end of the first year.

147. The course of study shall comprise the following:—

*Course.**First Year*

1. Mathematics.
2. Physics.
3. Chemistry.
4. Materials of Construction.

5. Freehand and Geometrical Drawing.
6. Workshop Practice.
7. Surveying.

Second Year

1. Applied Mechanics.
2. Graphic Statics.
3. Building Construction.
4. Geology.
5. Surveying.
6. Building Drawing.
7. Hydraulics.
8. Estimating and Specification.

Third Year

1. Railways.
2. Irrigation.
3. Earthwork, Roads and Bridges.
4. Water-supply and Sanitary Engineering.
5. Reinforced Cement Concrete.
6. Surveying.
7. C. E. Drawing (Bridges and Irrigation).
8. Estimating and Specifications.
9. Civil Engineering Laboratory.

148. Each year shall be taken as the unit for purposes of calculating attendance and consist of two terms as in Ordinance

Attendance. 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

149. There shall be an examination at the end of each year in the following subjects:—
Examination.

First Examination

1. Mathematics.*
2. Physics.*
3. Chemistry.*
4. Materials of Construction.
5. Freehand and Geometrical Drawing.*
6. Surveying.

* Common to all sections.

Second Examination

1. Applied Mechanics.
2. Graphic Statics.
3. Building Construction.
4. Geology.
5. Surveying.
6. Building Drawing.
7. Hydraulics.

Third Examination

1. Railways.
2. Irrigation.
3. Earthwork, Roads and Bridges.
4. Water-supply and Sanitary Engineering.
5. Reinforced Cement Concrete.
6. C. E. Drawing (Bridges and Irrigation).
7. Estimating and Specifications.
8. Surveying.
9. Civil Engineering Laboratory.

Only those successful in the First and the Second Examination shall be permitted to proceed to the second and the third year's course, respectively.

150. The minima for a pass in each examination shall be 30 per cent. of the marks in each paper of the written examination,

Minima. 30 per cent. of the aggregate marks in oral and practical examination and 50 per cent. of the total including the marks for class examination and class records. Successful candidates in the Final Examination obtaining not less than 70 per cent. of the aggregate marks in the examination shall be placed in the First Class in order of merit and the other successful candidates in the Second Class in alphabetical order.

The diploma shall be awarded after a year's approved practical training in an approved work, comprising 280 full working days after passing the Final Examination.

MECHANICAL ENGINEERING

151. The course of study for the Diploma in Mechanical Engineering shall extend over three years followed by a year's practical training in a recognized firm or workshop.

Duration.

152. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with one of the following optional subjects and shall have been declared eligible for admission to University courses of study:—

Admission.

Pattern making and Foundry work.
Woodwork.
Blacksmithy.
Mechanical Shop and Fitter's work.

Those who have passed the S.S.L.C. Examination in Mathematics and Science group shall be eligible for admission, subject to the condition that they shall undergo workshop practice in either fitter's or machine shop during the vacation at the end of the first year.

153. The course of study shall comprise the following:—

Course.

First Year

1. Mathematics.
2. Physics.
3. Chemistry.
4. Materials of Construction.
5. Freehand and Geometrical Drawing.
6. Workshop Practice.
7. Survey Practice.

Second Year

1. Applied Mechanics.
2. Electrical Engineering.
3. Internal Combustion Engines and Compressed Air Practice.
4. Workshop Theory.
5. Machine Construction.
6. Machine Drawing.
7. Workshop Practice.
8. Laboratory.

Third Year

1. Steam Engines and Refrigeration.
2. Hydraulics and Hydraulic Machinery.
3. Estimating, Specifications, etc.
4. Machine Construction.
5. Machine Drawing.
6. Workshop Practice.
7. Laboratory.

154. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the

course during the year, and his progress and conduct have been satisfactory.

155. There shall be an examination at the end of each year in the following subjects:—

Examination.

First Examination

1. Mathematics.*
2. Physics. *
3. Chemistry.*
4. Materials of Construction.†
5. Freehand and Geometrical Drawing.*
6. Workshop Practice.

Second Examination

1. Applied Mechanics.†
2. Electrical Engineering.‡
3. Internal Combustion Engines.‡
4. Workshop Theory.‡
5. Machine Construction.‡
6. Machine Drawing.‡
7. Workshop Practice.
8. Laboratory.

Final Examination

1. Steam Engine.
2. Hydraulics and Hydraulic Engineering.
3. Estimating.‡
4. Machine Construction.
5. Machine Drawing.
6. Workshop Practice.
7. Laboratory.

Only those successful in the First and the Second Examination shall be permitted to proceed to the second and the third year's course, respectively.

156. The minima for a pass in each examination shall be 30 per cent. of the marks in each paper of the written examination, 30 per cent. of the aggregate marks of the oral and practical examination and 50 per cent. of the total including the marks for the class examination, and class records. Successful candidates in the Final Examination obtaining not less than 70 per cent. of the aggregate marks

* Common to C.M.E. and Automobile branches.

† Common to M.E. and Automobile branches.

‡ Common to M. and Automobile branches.

shall be placed in the First Class in order of merit and the other successful candidates in the Second Class in alphabetical order.

The diploma shall be awarded after a year's practical training in an approved firm or workshop, comprising 280 full working days after passing the Final Examination.

ELECTRICAL ENGINEERING

157. The course of study for the Diploma in Electrical Engineering shall extend over three years followed by a year's practical training in a recognized firm or workshop.

158. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with one of the following optional subjects and shall have been declared eligible for admission to University courses of study:—

Pattern making and Foundry work.

Woodwork.

Blacksmithy.

Electrical Wiring and Fitting.

Those who have passed the S.S.L.C. Examination in Mathematics and Science group shall be eligible for admission, subject to the condition that they shall undergo workshop practice in either fitter's or machine shop during the vacation at the end of the first year.

159. The course of study shall comprise the following:—
Course.

First Year

1. Mathematics.
2. Physics.
3. Chemistry.
4. Materials of Construction.
5. Freehand and Geometrical Drawing.
6. Workshop Practice.
7. Surveying Practice.

Second Year

1. Applied Mechanics.
2. Electrical Engineering Materials.
3. Dynamo Electric Machinery.
4. Mechanical Engineering.
5. Hydraulics and Hydraulic Machinery.
6. Mechanical and Electrical Drawing and Sketching.
7. Workshop Appliances and Workshop Practice and Mechanical Laboratory.
8. Electrical Laboratory.

Third Year

1. Electrical Engineering—A.C. Machines.
2. Electrical Technology.
3. Estimating.
4. Heat Engines.
5. Electrical Drawing and Sketching.
6. Workshop Practice and Mechanical Laboratory.
7. Electrical Laboratory.

160. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year, and his progress and conduct have been satisfactory.

161. There shall be an examination at the end of each year in the following subjects :—

*Examination.**First Examination*

1. Mathematics.*
2. Physics.*
3. Chemistry.*
4. Materials of Construction.†
5. Freehand and Geometrical Drawing.*
6. Workshop Practice.

Second Examination

1. Applied Mechanics.†
2. Electrical Engineering Materials.
3. Dynamo Electric Machines.
4. Mechanical Engineering.
5. Hydraulics and Hydraulic Machinery.
6. Machine Drawing.
7. Workshop Appliances and Workshop Practice and Mechanical Laboratory.
8. Electrical Laboratory.

Final Examination

1. Electrical Engineering—A.C. Machines.
2. Electrical Technology.
3. Estimating.

* Common to Civil, Mechanical, Electrical and Automobile Engineering.

† Common to Mechanical, Electrical and Automobile Engineering.

4. Heat Engines.
5. Electrical Drawing.
6. Workshop Practice and Mechanical Laboratory.
7. Electrical Laboratory.

Only those successful in the First and the Second Examination shall be permitted to proceed to the second and the third year's course, respectively.

162. The minima for a pass in each examination shall be 30 per cent. of the aggregate marks in each paper of the written examination, 30 per cent. of the aggregate marks in the oral and practical examination and 50 per cent. of the total including the marks for class examination and class records. Successful candidates in the Final Examination obtaining not less than 70 per cent. of the aggregate marks shall be placed in the First Class in order of merit and the other successful candidates in Second Class in alphabetical order.

The diploma shall be awarded after a year's approved practical training in a recognized firm or workshop comprising 280 full working days after passing the Final Examination.

AUTOMOBILE ENGINEERING

163. The course of study for the Diploma in Automobile Engineering shall extend over three years followed by a year's practical training in a recognized firm or workshop.

164. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with one of the following optional subjects and shall have been declared eligible for admission to University courses of study:—

- Duration.
- Pattern making and Foundry work.
- Woodwork.
- Blacksmithy.
- Mechanical Shop and Fitter's work.

Those who have passed the S.S.L.C. Examination in Mathematics and Science group shall be eligible for admission, subject to the condition that they shall undergo workshop practice in either fitter's or machine shop during the vacation at the end of the first year.

165. The course of study shall comprise the following:—
Course.

First Year

1. Mathematics.
2. Physics.
3. Chemistry.
4. Materials of Construction.

5. Freehand and Geometrical Drawing.
6. Workshop Practice.
7. Survey Practice.

Second Year

1. Applied Mechanics.
2. Electrical Engineering.
3. Internal Combustion Engines and Compressed Air Practice.
4. Workshop Theory.
5. Machine Construction.
6. Machine Drawing.
7. Workshop Practice.
8. Laboratory.

Third Year

1. Fuel and Carburation.
2. Machine Construction.
3. Body Construction, Painting and Varnishing.
4. Estimating.
5. Drawing.
6. Workshop Practice.
7. Laboratory.

166. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

167. There shall be an examination at the end of each year in the following subjects:—

Examination.

First Examination

1. Mathematics.*
2. Physics.*
3. Chemistry.*
4. Materials of Construction.†
5. Freehand and Geometrical Drawing.*
6. Workshop Practice.

* Common to all branches.

† Common to Mechanical and Automobile branches.

Second Examination

1. Applied Mechanics.†
2. Electrical Engineering.
3. Internal Combustion Engines.‡
4. Workshop Theory.‡
5. Machine Construction.‡
6. Machine Drawing.†
7. Workshop Practice.
8. Laboratory.

Final Examination

1. Fuel and Carburation.
2. Machine Construction.
3. Body Construction, Painting and Varnishing.
4. Estimating.‡
5. Drawing.
6. Workshop Practice.
7. Laboratory.

Only those successful in the First and the Second Examination shall be permitted to proceed to the second and the third year's course, respectively.

168. The minima for a pass in each examination shall be 30 per cent. of the marks in each paper of the written examination,

30 per cent. of the aggregate marks in the oral and practical examination and 50 per cent. of the total including the marks for class examination and class records. Successful candidates in the Final Examination obtaining not less than 70 per cent. of the aggregate marks shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

The diploma shall be awarded after a year's approved practical training in an approved firm or workshop, comprising 280 full working days after passing the Final Examination.

TEACHING

169. The course of study for the Diploma in Teaching shall extend over two years.

Duration.

170. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with the Humanistic or the Mathematics and Science group and been declared eligible for admission to University courses of studies.

Admission.

† Common to Mechanical and Automobile branches.

‡ Common to Mechanical, Electrical and Automobile branches.

171. The course of study shall comprise the following:—

Course.

(i) General—

(a) English, History, Geography, Civics and Rural Science or Domestic Science.

Or

(b) English, Elementary Mathematics, Elementary Science, Hygiene and Rural Science or Domestic Science.

(ii) Professional, consisting of—

(a) Theory and (b) Practice in Teaching.

The theoretical course shall comprise:—

(1) Principles of Education.

(2) School Organisation, Management and Hygiene.

(3) Methods—

(a) General Principles of Method.

(b) Special Methods of Teaching—

English, History, Geography and Civics

Or

English, Elementary Mathematics, Elementary Science and Hygiene.

172. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered

Attendance.

to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

173. There shall be two examinations—the Preliminary Examination at the end of the first year and the Final Examination at the end of the second year. Only those

Examination.

who pass in the Preliminary Examination shall be permitted to proceed to the second year's course.

The Preliminary Examination shall comprise two papers in the 'General' subjects and the Final Examination shall comprise four papers in the 'Professional' subjects and an examination in Practice in Teaching as under:—

Preliminary Examination

Two papers in each group, viz.,—

(i) (a) and (b) English and Rural Science or Domestic Science.

(ii) (a) History, Geography and Civics.

Or

(b) Elementary Mathematics, Elementary Science and Hygiene.

*Final Examination**(a) Theory*

Four papers, *viz.*,—

- (i) Principles.
- (ii) School Organisation, etc.
- (iii) General Principles of Method and Methods of Teaching English.
- (iv) Methods of Teaching History, Geography and Civics.

Or

Elementary Mathematics, Elementary Science and Hygiene.

(b) Practical

Three lesson-tests, one in English and two in any two of the other subjects in either of the two groups, *i.e.*, History, Geography and Civics *or* Elementary Mathematics, Elementary Science and Hygiene.

174. The minima for a pass in the Preliminary Examination shall be 35 per cent. of the marks in each paper and 50 per cent. of the aggregate marks for the examination.

Minima.

The minima for a pass in the Final Examination shall be 35 per cent. of the marks in each paper, 40 per cent. of the marks in theory, 40 per cent. of the marks for practical and 50 per cent. of the aggregate marks. Successful candidates obtaining not less than 60 per cent. of the aggregate marks shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

Candidates failing in the Final Examination who shall have passed in theory obtaining not less than 50 per cent. of the marks in the aggregate, shall be permitted to appear again for the practical examination only.

COMMERCE

175. The course of study for the Diploma in Commerce shall extend over three years followed by six months' practical training.

Duration.

176. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with commercial arts C (v), as the optional group, and been declared eligible for admission to University courses. Candidates who shall have passed the S.S.L.C. Examination with Group A or B will also be eligible.

Admission.

177. The course of study shall comprise the following:—

Course.

Part I—Compulsory.

1. English.
2. Economics and Statistics.
3. Commercial Geography.
4. Book-keeping and Commercial Arithmetic.
5. Secretarial Practice and Procedure.
6. Stenography.

Part II—Optional

Any one of the following:—

1. Accountancy—
 - (a) Advanced Accounts, I.
 - (b) Advanced Accounts, II.
 - (c) Auditing.
2. Banking—
 - (a) Money.
 - (b) Banking.
 - (c) Commercial Law.
3. Insurance—
 - (a) Principles of Insurance.
 - (b) Insurance Organization and Management.
 - (c) Insurance Law and Assessment.
4. Office Management (Business Offices)—
 - (a) Methods and Machinery of Business.
 - (b) Accountancy.
 - (c) Commercial Law.
5. Office Management (Government Offices)—
 - (a) Advanced English.
 - (b) Civil Accounts.
 - (c) Office Routine.

178. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

Attendance.

179. There shall be two examinations—the Preliminary Examination in Part I (compulsory subjects) at the end of the second year comprising six papers, one in each subject, and the Final Examination in Part II (optional subjects) at the end of the third year comprising three papers in each optional group. Only those passing in the Preliminary Examination shall be permitted to proceed to the third year's course.

Examination.

180. The minima for a pass in each examination shall be 35 per cent. of the marks in each paper and 50 per cent. of the aggregate marks of the examination. Successful candidates in the Final Examination obtaining not less than 60 per cent. of the aggregate marks in the Final Examination shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

A candidate qualified for the diploma in any one subject of Part II may proceed to take the diploma in another subject after a further year's study under instruction in the latter subject.

The diploma shall be awarded after six months' approved practical training in a recognized office after passing the Final Examination.

PRINTS AND ENGRAVING

181. The course of study for the Diploma in Prints and Engraving shall extend over three years.

Duration.

182. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Prints and Engraving or Drawing and Painting or Mathematics and Science as the optional subject and been declared eligible for admission to University courses.

183. The course of study shall comprise the following:—
Course.

First Year

Drawing, Materials, Engraving on Copper Plates, Engraving on Lines.

Second Year

Drawing, Engraving on Copper, Etching Tools, various methods of placing the design on the prepared ground, Etching the Copper Plate and Printing.

Third Year

Drawing, Engraving and Etching on Copper Plates, Die-stamping, Die-sinking and Relief Printing.

184. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent.

of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

185. There shall be an examination at the end of the third year comprising seven papers as under:—

Examination.

Engraving on copper plates—

I Theory.

II Practical.

Etching—

I Theory.

II Practical.

Die-sinking and Die-stamping.

Relief Printing (preparation of dies as well as printing).

Drawing.

186. The minima for a pass shall be 35 per cent. of the marks in each theory paper, 35 per cent. of the marks in each practical paper and 50 per cent. of the aggregate marks for the examination. Successful candidates obtaining not less than 60 per cent. of the aggregate marks shall be placed in the first class in order of merit, and the other successful candidates in the second class in the alphabetical order.

Minima.

PRINTING AND BINDING

187. The course of study for the Diploma in Printing and Binding shall extend over three years.

Duration.

188. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with the Mathematics and Science Group (Group B) or with Composing, Printing and Binding [Group C (iv) (i)] for the optional subject, and been declared eligible for admission to University courses.

Admission.

189. The course of study shall comprise the following:—

Course.

I. Compositor's work.

II. Press and Machine work (including departmental management).

III. Binding comprising Letterpress Forwarding, Vellum or Stationery Binding, Finishing and Design.

190. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered

Attendance. to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year, and his progress and conduct have been satisfactory.

191. There shall be an examination at the end of the course consisting of six papers as under:—

Examination.

Composing	..	..	Theory 1 Practical 1
Machine	..	..	Theory 1 Practical 1
Binding	..	..	Theory 1 Practical 1.

192. The minima for a pass shall be 35 per cent. of the marks in theory, and 35 per cent. of the marks in the practical in each subject and 50 per cent. of the aggregate marks for the examination. Successful

Minima. candidates obtaining not less than 60 per cent. of the aggregate marks shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

PHARMACY

193. The course of study for the Diploma in Pharmacy shall extend over three years, of which six months shall be spent in intensive practical training in a recognized pharmaceutical laboratory.

Duration.

194. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with the Mathematics and Science Group (Group B) as the optional subject and been declared eligible for admission to University courses.

Admission.

195. The course of study shall comprise the following:—

Course.

First Year

Elements of Physics, Chemistry, Botany and Zoology—
Lectures with practical work.

Second Year

Pharmaceutical Chemistry, Pharmacognosy, Pharmaceutics—Lectures with practical work.

Elements of Physiology with important demonstrations.

Third Year

Pharmaceutical Chemistry, Pharmaceutics—Lectures with practical work.

Demonstrations in Experimental Physiology and Pharmacology.

Intensive practical training including training in a pharmaceutical laboratory.

196. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered

Attendance. to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year and his progress and conduct have been satisfactory.

197. There shall be two examinations—the Preliminary Examination at the end of the first year and the Final Examination at the end of the third year, according to the following scheme:—

Examination.

Preliminary Examination

Physics	..	..	Theory Practical <i>Viva voce</i>
Chemistry	..	..	Theory Practical <i>Viva voce</i>
Botany ..	..	..	Theory Practical <i>Viva voce</i>
Zoology	..	..	Theory Practical <i>Viva voce</i>

Final Examination

Pharmaceutical Chemistry			Theory Practical <i>Viva voce</i>
Pharmaceutics ..	..	..	Theory Practical <i>Viva voce</i>

Only those who pass in the Preliminary Examination shall be permitted to proceed to the second year's course. A candidate for the Final Examination shall produce a certificate of having obtained in the class examination at the end of the second year, not less than 35 per cent. of the marks each in Elements of Physiology and in Pharmacognosy.

198. The minima for a pass in each examination shall be 35 per cent. of the marks in each subject (including Theory, Practical and *Viva voce*) and 50 per cent. of the aggregate marks for the examination.

Minima. Successful candidates in the Final Examination obtaining not less than 60 per cent. of the aggregate marks in the examination shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

MUSIC

199. The course of study for the Diploma in Music shall extend over three years.

Duration.

200. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Music as the optional subject and been declared eligible for admission to University courses.

Admission.

201. The course of study shall comprise the following:—

Course.

1. A selected language.
2. The Practice of Music.
3. The Theory of Music.

COURSES OF STUDY

First Year

(a) 3 Ordinary Geethas, 3 Lakshana Geethas, 3 Svarajathis, 7 Varnas, 25 Keerthanes, 2 Thillanas, 2 Javalis and 2 Devaranamas.

(b) In the portion of the Theory of Music, the subjects (a), (f), (h) and (i) should be dealt with.

Second Year

(a) The remaining 6 Geethas and 3 Svarajathis, 10 Varnas, 25 Keerthanes, 4 Devaranamas, 2 Kshethraya padas, 1 Sooladi, 1 Ragamalika, 3 Thillanas, 1 Prabhandha and 3 Javalis.

(b) Exercises in Ragalapana and Svara improvisations.

(c) The Theory aspects (b), (d), (e) and (g).

Third Year

The remainder of the syllabus.

The selected language shall be one of the following, provided that it shall not be the same as the language offered by the candidate for the S.S.L.C. Examination:—

Sanskrit, Kannada, Telugu, Tamil, Urdu.

202. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered

Attendance.

to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year, and his progress and conduct have been satisfactory.

203. There shall be an examination at the end of the third year comprising a paper each on the selected language and the theory of music and two practical tests each of forty-five minutes' duration per candidate.

Examination.

204. The minima for a pass shall be 35 per cent. of the marks in each paper, 50 per cent. of the marks in each practical test and 50 per cent. of the marks in the aggregate. Successful candidates obtaining not less than 60 per cent. of the aggregate marks shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

Minima.

HOME SCIENCE

205. The course of study for the Diploma in Home Science shall extend over three years for the Teachers' Diploma in Home Science and over two years for others (Homemakers' Diploma).

Duration.

206. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore or an equivalent examination with Domestic Arts [C (i)] as the optional subject and been declared eligible for admission to University courses of studies.

Admission.

207. The course of study shall comprise the following:—

Course.

First Year

(Common to Homemaker's Diploma and Teacher's Diploma)

Physiology
Bacteriology
Hygiene
Biology

Economic Biology
First Aid
Home Nursing.

*Second Year***(Common to Homemaker's Diploma and Teacher's Diploma)**

Home Economics and Civics
 Business Affairs and Book-keeping
 Household Subjects and Gardening
 Needle work.

*Third Year***(Teacher's Diploma only)**

Physics
 Chemistry
 Biochemistry
 Institutional Management
 Psychology and Principles of Education.

208. Each year shall be taken as the unit for purposes of calculating attendance, and shall consist of two terms as in Ordinance 48. A candidate shall be considered to have completed the course of studies for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the course during the year, and his progress and conduct have been satisfactory.

209. There shall be an examination at the end of each year as follows:—

Examination.*First Year***(Preliminary Examination)**

- | | | |
|------|----------------------------------|---------|
| I. | Physiology: Theory | 1 Paper |
| | Practice | |
| II. | Hygiene and Bacteriology: Theory | 1 Paper |
| III. | Biology | 1 Paper |
| IV. | First Aid and Home Nursing: | |
| | Theory .. | 1 Paper |
| | Practice | |

Second Year

Final Examination for the Homemaker's Diploma and Part I of the Final Examination for the Teacher's Diploma:—

- | | | | |
|-----|------------------------------------|---------|---------|
| I. | Home Economics and Civics .. | 1 Paper | 2 hours |
| II. | Business Affairs & Book-keeping .. | 1 Paper | .2- „ |

III.	Household Subjects & Gardening ..	Paper I	3 hours
		Paper II	3 "
	Practical I (Cooking) ..		3 "
	II (Housewifery and Laundry) ..		3 "
IV.	Needle work	Paper I	3 "
		Paper II	3 "

Third Year

Part II of the Final Examination for the Teacher's Diploma:

I.	Physics, Chemistry and Bio-Chemistry: Theory ..		3 hours
	Practice ..		3 "
II.	Institutional Management ..	1 Paper	2 "
III.	Psychology and Principles of Education: Theory ..	1 Paper	3 "
	Practical (Teaching) ..		

210. The minima for a pass shall be 35 per cent. of the marks in each paper, 35 per cent. of the marks in each practical examination and 50 per cent. of the aggregate marks for the examination. Successful candidates obtaining not less than 60 per cent. of the aggregate marks shall be placed in the first class in order of merit and the other successful candidates in the second class in alphabetical order.

PAINTING AND DRAWING

211. The course of study for the Diploma in Fine Arts (Painting and Drawing) shall extend over three years.

212. Candidates for admission shall have passed the S.S.L.C. Examination of Mysore with Drawing and Painting as optional subjects and been declared eligible for admission to a University course, or possess an equivalent qualification.

213. The course of study shall comprise the following:—
Course.

First Year

(1) Sketches and finished drawings of groups of articles with general masses of shades and lights in black, white, or colour.

(2) Sketches from nature, flowers, plants, trees, etc., suitable for use in decorative designs for art and commercial purposes.

(3) Sketches from plaster models of flowers, fruits, animals, heads and busts of human figures on white or tinted papers in crayon and chalk.

(4) Still-life painting in oils and water colours.

(5) Decorative designs.

(6) Memory Drawing—insects, birds, plants, etc.

(7) Theory—pigments—their nature and use.

(8) Theory—materials and medium.

Second Year

(1) Sketches from plaster models—full figure.

(2) Sketches from living models in various poses.

(3) Still-life painting in oil or water.

(4) Finished drawings of human figure in crayon or pastles.

(5) Painting from head from life (living models) in oil or water colour.

(6) Figure composition in Indian as well as Western styles of painting.

(7) Outdoor work such as landscapes, street scenes and architectural subjects.

(8) Perspective and Anatomy.

(9) Memory Drawing—animals, etc.

(10) Theory—principles of design.

Third Year

(1) Portrait painting in oil or water colours.

(2) Painting from life in different lights.

(3) Sketches and drawings from living models in chalk or pastles and time sketches.

(4) Mythological and Historic compositions in Western or Indian style of Painting and Mural Painting.

(5) Decorative designs of human and animal figures.

(6) Landscapes—atmospheric effects such as fog, mist, rain, sunshine, sunrise, sunset, nocturne.

(7) Commercial Art—poster, calendars, show-card designs, cartoons, etc.

(8) Theoretical instruction will also be given along with practical work and arrangements will be made for popular lectures on art.

(9) Excursions for art study.

214. Each year shall be taken as the unit for purposes of calculating attendance and shall consist of two terms as in Ordinance 48. A candidate shall be considered

to have completed the course of study for any examination if he has attended not less than 80 per cent. of the number of working periods in each of the subjects of the

course during the year, and his progress and conduct have been satisfactory.

215. There shall be an examination at the end of the course, comprising the following:—

- Examination.
- (1) Portrait painting from life—bust or full figure.
 - (2) Time drawing from life—bust or life figure.
 - (3) Anatomy of human figure.
 - (4) Figure composition from life (realistic).
 - (5) Mythological or historic composition in Indian or Western style of painting (Decorative).
 - (6) Commercial Art—posters, cartoons, etc.

216. The minimum for a pass shall be 35 per cent. of the marks in each paper, 35 per cent. of the marks in the practical examination and 50 per cent. of the aggregate marks for the examination. Successful candidates obtaining not less than 60 per cent. of the aggregate marks shall be placed in the first class in order of merit and the other successful candidates in the second class in the alphabetical order.

DETAILED COURSES OF STUDIES

217. Details of courses of study for the following shall be given in Chapter II:—

- (a) Intermediate Examinations.
- (b) B.A. Degree Examination (Pass and Honours).
- (c) B.Sc. Degree Examination (Pass and Honours).
- (d) M.A. Degree Examination.
- (e) M.Sc. Degree Examination.
- (f) B.T. Degree Examination.
- (g) B.E. Degree Examination.
- (h) Pre-Medical Examination.
- (i) Diploma Courses.

DETAILED SCHEMES OF EXAMINATIONS

218. The schemes of examinations for the following shall be as given in Chapter II:—

- (a) Intermediate Examinations.
- (b) B.A. and B.Sc. Degree Examinations.
- (c) B.A. (Hons.) and B.Sc.(Hons.) Degree Examinations.
- (d) M.A. Degree Examination.
- (e) M.Sc. Degree Examination.
- (f) B.T. Degree Examination.

- (g) (i) First Examination for the B.E. Degree.
 - (ii) Second Examination for the B.E. Degree.
 - (iii) Third Examination for the B.E. Degree.
 - (iv) Final Examination for the B.E. Degree.
- (h) Pre-Medical Examination.
- (i) First Examination for the Degree of M.B.B.S.
 - Second Examination for the Degree of M.B.B.S.
 - Final Examination for the Degree of M.B.B.S.
- (j) First Examination for the Diploma of L.M.P.
 - Second Examination for the Diploma of L.M.P.
 - Third Examination for the Diploma of L.M.P.
 - Final Examination for the Diploma of L.M.P.
- (k) Agriculture.
- (l) Sericulture.
- (m) Veterinary Science.
- (n) Civil Engineering.
- (o) Mechanical Engineering.
- (p) Electrical Engineering.
- (q) Automobile Engineering.
- (r) Teaching.
- (s) Commerce.
- (t) Prints and Engraving.
- (u) Printing and Binding.
- (v) Pharmacy.
- (w) Music.
- (x) Home Science.
- (y) Painting and Drawing.

Transitory Ordinances

B.A. AND B.Sc.

A. The following are the transitory ordinances respecting the provision for candidates for the B.A. or B.Sc. Degree under the old rules who have not been able to complete the Degree :

(i) Candidates for either degree shall put in further attendance in the senior class for not less than one academical year before they are permitted to appear for the examination.

B.A.

- (ii) (a) Candidates having English to complete shall take Compulsory English and Optional English under the new rules.

- (b) Candidates having Second Language to complete shall take Second Language Composition or Translation under the new rules.
- (c) Candidates having the Optional Group to complete shall take two subjects under the new scheme corresponding to the subjects formerly taken by them.

(iii) The fee for tuition shall be as follows:—

Whole Examination	Rs. 96 a year
	(plus Rs. 12 for Science subjects)
(a) English	Rs. 40
(b) Second Language	„ 20
(c) Optionals	„ 40
	(plus Rs. 12 for Science subjects)

(iv) The Examination shall be held in three compartments as under:—

PART I—English	(Compulsory 5 papers and Optional).
PART II—Second Language	(Composition or Translation). 1 paper
PART III—Two optional subjects	3 papers in the new scheme (corresponding to those which had already been offered). each.

The minimum for a pass shall be as follows:—

PART I	.. .. 35 per cent. in the aggregate.
PART II	.. .. 35 per cent.
PART III	.. .. 35 per cent. in each division; 40 per cent in the aggregate.

Of the successful candidates, those obtaining not less than 60 per cent. in any part will be placed in the first class in that part, those obtaining not less than 50 per cent. in the second class and the rest in the third class.

(v) The fee for admission to the examination shall be as follows:—

Whole examination	.. Rs. 40
	(plus Rs. 5 for Science subjects)
English	.. Rs. 20
Second Language	.. „ 6
Optional subjects	.. „ 20
	(plus Rs. 5 for Science subjects)

(vi) The following shall be the correspondence of optional subjects as between the old scheme and the new in Arts subjects in regard to the B.A Degree Examination:—

Subjects in the old scheme	Corresponding subjects in the new scheme
1. History.— (i) Indian History (ii) European History from 1789 (iii) Indian Political Institutions	(i) Indian History (ii) European History after 1789 (iii) Indian Political Institutions <i>Note.</i> —Candidates who failed in the examination in 1922 taking History as one of the optional subjects will be examined in the paper on Indian Political Institutions in place of European History 476–1789.
2. (a) Economics and Political Science— (i) General Economics (ii) Political Science (iii) Economics and Political Science with special reference to Indian conditions after 1850	(i) Economics—General I (ii) Economics—General II (iii) Comparative Politics
(b) Economics and Statistics— (i) Economics (ii) Statistics (iii) Economics and Political Science with reference to Indian conditions after 1850	(i) General Economics I (ii) General Economics II (iii) Elements of Statistics
3. Philosophy I— (i) Psychology (ii) Logic and Theory of Knowledge (iii) Indian Philosophy	(i) General Psychology (ii) Logic (iii) Indian Philosophy
4. Philosophy II— (i) Ethics (ii) Political Philosophy (iii) Sociology or Educational Psychology	(i) Ethics (ii) Political Philosophy (iii) Principles of Sociology I or Educational Psychology
5. Philosophy III— (i) General Psychology (ii) Experimental Psychology (iii) Educational Psychology	(i) General Psychology (ii) Experimental Psychology (Theory) (iii) Experimental Psychology

Subjects in the old scheme	Corresponding subjects in the new scheme
<p>6. (a) Mathematics— (i) Trigonometry and Geometry (ii) Algebra and Calculus (iii) Astronomy (iv) Dynamics</p> <p>(b) Mathematics— (i) Trigonometry and Geometry (ii) Algebra and Calculus (iii) General Statistics (iv) Applied Mathematics (Economics)</p>	<p>(i) Pure Mathematics I - (ii) Pure Mathematics II (iii) Applied Mathematics, Dynamics, Statics and Astronomy</p> <p>(i) Pure Mathematics I (ii) Pure Mathematics II (iii) Applied Mathematics—General Statics and application of Mathematics to Economics and Mental and Social Measurements</p>
<p>7. In the case of the other subjects, the whole examination in the corresponding subject under the new rules shall be taken.</p>	

Note.—In the third paper in Mathematics (b) alternative questions will be set in respect of those relating to Mental and Social Measurements.

B.Sc.

- (vii) Candidates having English to complete shall take Compulsory English under the new rules.
 The tuition fee shall be Rs. 30 per year.
 The Examination Fee shall be Rs. 10.
 The minimum for a pass shall be 35 per cent. in the aggregate.

(viii) Candidates having the optional group to complete shall undergo the entire course of two years for the B.Sc. under the new rules with exemption in Part I only.

INTERMEDIATE EXAMINATION

B. (i) Candidates for the Intermediate Examination unsuccessful in the examination of 1938 or any preceding year who appear at a subsequent examination without further attendance in accordance with Ordinance 54, shall be exempted from the requirement regarding class records and class examinations.

(ii) That as a transitory measure during 1940-41 and 1941-42 candidates successful in the S.S.L.C. Examination with an optional group elected from C or D be permitted to join the Intermediate Course in Arts.

M.B.B.S.

C. (i) Consequent upon the revision of the scheme for the Second and Final M.B.B.S. Degree Examination, published in Notification No. 16090, dated the 7th January 1939, and coming into effect with effect from the third year class of 1939, candidates for the Second Examination held in 1938 not successful in the examination may be allowed to proceed to the fourth year class and appear on the completion of the fourth year's course for the Second Examination under the old scheme, as well as for Part I of the Final Examination under the old scheme. The results of the Second Examination so held shall be declared in two parts: Part I comprising Pharmacology and Part II comprising Pathology including Bacteriology and Hygiene. Pass in both the parts shall be compulsory before a candidate can proceed to the fifth year class.

(ii) The following is the scheme of the Second and the Final M.B.B.S. Examinations during the transitory period:—

1939 June	Old Final Examination Parts I and II, for failed candidates.
1939 December, III Year Class	New Second Examination, Pt. I.
IV Year Class	Old Second Examination for failed candidates of 1938 (results to be declared in parts). Old Final Examination, Pt. I.
V Year Class	Old Final Examination, Part II. Old Final Examination, Part I for failed candidates.
1940 June	Old Final Examination, Parts I and II for failed candidates.
1940 December III Year Class	New Second Examination, Pt. I.
IV Year Class	New Second Examination, Pt. II. New Second Examination, Pt. III. (Old Second Examination Parts I and II for failed candidates—papers to be common with the corresponding papers for the new examination).
V Year Class	Old Final Examination, Pt. II (and Old Final Examination Pt. I for failed candidates).
1941 June	Old Final Examination, Parts I and II for failed candidates.

1941 December	III Year Class..	New Second Examination, Pt. I.
	IV Year Class	New Second Examination, Pt. II. New Second Examination, Pt. III. (Old Second Examination for failed candidates, if any).
	V Year Class	New Final Examination (and Old Final Examination, Parts I and II for failed candidates).

PART IV. RULES OF BUSINESS AND PROCEDURE

A.—Rules of Business of the Senate

1. The Registrar shall, under the direction of the Vice-Chancellor, give to members not less than 45 clear days' notice of the date of an ordinary meeting.

2. (1) Fifteen clear days' notice shall ordinarily be given of a special meeting convened by the Vice-Chancellor under Statute 8 (i), but in case of urgency the Vice-Chancellor may convene a special meeting at shorter notice. Along with the notice of the meeting the Registrar shall send to each member a statement of the business to be transacted at the meeting.

(2) Fifteen clear days' notice shall be given to members of a special meeting convened by the Vice-Chancellor on a requisition under Statute 8 (ii). Along with the notice the Registrar shall send to each member a copy of the resolution or resolutions, with the name of the mover of each resolution to be moved at the meeting.

3. (1) Any member who wishes to move a resolution at an ordinary meeting shall forward a copy of the resolution to the Registrar so as to reach him not less than 35 clear days before the date of the meeting, provided that in respect of resolutions relating to amendments of an existing law the form in which the law would stand as revised shall also be stated.

(2) A member who has forwarded a resolution may, by giving written notice which shall reach the Registrar not less than seven clear days before the date fixed for the despatch of the agenda paper, withdraw the resolution.

(3) It shall be competent for the Vice-Chancellor to disallow any resolution which in his opinion does not fall within the purview of the Senate, or otherwise contravenes the provisions of the Act, the Statutes or the Ordinances, or in his opinion is likely to be injurious to the interests of the University.

(4) The Registrar shall include in the agenda paper all resolutions of which due notice has been given and which have not been withdrawn or disallowed under the preceding clauses.

4.* (1) At a special meeting of the Senate convened by the Vice-Chancellor under Statute 8 (i), no business other than that brought forward by the University Council or the Vice-Chancellor, shall be transacted.
Business of special meetings.

(2) At a special meeting of the Senate convened by the Vice-Chancellor on a requisition by members under Statute 8 (ii) only the resolutions given notice of by the requisitionists and amendments thereto, and such urgent business as may be brought forward by the University Council or the Vice-Chancellor, shall be transacted.

5. (1) Notwithstanding the notice for resolutions prescribed in Rule 3, any member who wishes to move a resolution on any report or statement by the Council included in the agenda paper, or on any Statute placed before the Senate and included in the agenda paper, may do so on giving notice of the resolution, which shall reach the Registrar not less than fifteen clear days before the date of the meeting:
Resolutions on Ordinances and Council reports.

Provided that no such notice shall be necessary in the case of resolutions relating to urgent business brought forward by the University Council or the Vice-Chancellor and not included in the agenda.

(2) Resolutions of which due notice has been received by the Registrar shall be included in the amended agenda paper.

6. Not less than 21 clear days before the date of an ordinary meeting and not less than 15 clear days before the date of a special meeting, the Registrar shall, under the direction of the Vice-Chancellor, issue to every member an agenda paper specifying the day and the hour of the meeting and the business to be brought before the meeting, but the non-receipt of the agenda paper by any member shall not invalidate the proceedings of the meeting:

Date for despatch of agenda paper.

Provided that the University Council or the Vice-Chancellor may bring forward any business which in its or his opinion is urgent before any ordinary or special meeting convened under Statute 8 (i) with shorter notice and without placing the same on the agenda paper.

7. Any member who wishes to move an amendment to a resolution on the agenda paper of any meeting of the Senate shall forward a copy of the same to the Registrar so that it reaches him not less than fifteen clear days previously in the case of an ordinary meeting and ten days previously in the case of

Notice of amendments.

a special meeting convened under Statutes 8 (i) and 8 (ii) with not less than fifteen clear days' notice.

8. The Registrar shall, under the direction of the Vice-Chancellor, prepare a complete agenda paper showing all the resolutions and amendments to be moved, and shall post a copy of it to each member of the Senate not less than five clear days before the date of any meeting:

Amended agenda paper.

Provided that in the case of a special meeting convened under Statute 8, the amended agenda paper may be sent at a shorter interval before the meeting or may be placed before the members at the meeting.

9. Unless the Senate otherwise resolve, the Senate shall ordinarily meet at 12 noon on each day appointed for the meeting, and the Chairman shall adjourn the

Hours of meeting. meeting at 6 p.m. or earlier if the business on the agenda is finished. There shall be half an hour's adjournment in the afternoon:

Provided that if at the time prescribed for either adjournment, proceedings under closure motion are in progress, the Chairman shall not adjourn the meeting until the questions consequent thereon have been decided:

Provided also that, if any voting is in progress, the voting and the proceedings consequent thereon shall be completed before the meeting is adjourned:

Provided, further, that on occasions of emergency the Chairman shall have the power to suspend or adjourn the meeting at any time.

10. Subject to the provisions of other laws in this behalf, no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place:

Business at adjourned meetings.

Provided that the University Council or the Vice-Chancellor may bring any urgent business before an adjourned meeting with or without notice.

When a meeting is adjourned for fifteen days or more, not less than ten clear days' notice of the adjourned meeting and of the business to be transacted at it shall be given. Save as aforesaid, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

11. Save as permitted by the rules herein contained, no resolution or amendment which is not placed on the agenda paper shall be moved at a meeting.

Resolutions or amendments not on agenda paper.

12. In the absence of the Vice-Chancellor from a meeting of the Senate, the members present shall elect a Chairman from among their number.

13. The business to be transacted at a meeting of the Senate shall be placed on the agenda paper in the following order:—

(i) The answering of questions.

(ii) Business brought forward by the University Council.

(iii) Business brought forward by members of the Senate.

At any meeting it shall be open to any member to move for a change in the order of business as stated in the agenda paper.

If the motion for a change in the order of business as stated in the agenda paper is agreed to by the Senate, the business shall be transacted in the changed order.

14. At any meeting the Chairman may, without any formal motion made, permit the correction of clerical or typographical mistakes in notices or motions or in reports or statements or other business placed before the meeting.

15. At any meeting of the Senate, motions of a complimentary character may, without previous notice, be moved from the Chair or by any member with the previous permission of the Chair.

16. At any meeting of the Senate, any member may, with the permission of the Senate, move any amendment to any resolution brought forward by the University Council or the Vice-Chancellor under the proviso contained in Rule 6; or by a member under Rule 5 or to a resolution included in the agenda paper of a special meeting convened on less than fifteen clear days' notice under Rule 2 (1).

17. At any meeting of the Senate, the following resolutions may be moved without previous notice:—

(1) A resolution relating to business not included in the agenda but brought forward by the Council or the Vice-Chancellor under Rule 6.

(2) A motion for a change in the order of business as stated on the agenda paper.

(3) A motion directing the Council, the Academic Council, a Faculty, a Board of Studies or any committee to review or reconsider its decision or recommendation and to report at a subsequent meeting of the Senate.

(4) A motion for the appointment of a committee to consider and report on any matter before the Senate at the time.

(5) A motion remitting any matter before the Senate at the time to the Council or the Academic Council or a Faculty or Board of Studies for consideration and report.

(6) A motion for the adjournment of the meeting or of the debate on any question to a specified time.

(7) A motion that the Senate do resolve into a committee to consider any matter before the Senate at the time.

(8) A motion that the meeting be dissolved.

(9) A motion that the meeting pass to the next item on the agenda paper.

(10) A motion that the question be now put.

18. Every motion shall be affirmative in form and shall begin with the word "That"
Form of motions.

19. When a motion has been seconded, it shall be stated from the Chair unless it be ruled out of order.

20. When the motion has thus been stated, it may be discussed as a question to be resolved either in the affirmative or in the negative or to be altered by amendment.

Discussion. When no member of the Senate rises to speak to the motion, the Chairman shall proceed to put the question to the vote in the manner hereinafter mentioned.

21. Not more than one motion and one amendment thereto shall be placed before the meeting at the same time.
Only one motion and one amendment at a time.

22. A motion substantially identical with one already moved and disposed of at a meeting shall not be moved at the same meeting or at a subsequent meeting until after a lapse of eleven months from the date of such meeting. A motion substantially identical in part with one already disposed of may be brought forward again with the omission of such part:

Reconsideration of propositions once disposed of.

Provided however that it shall be open to the University Council to bring forward any subject for reconsideration at a meeting before the expiry of the eleven months aforesaid, if in its opinion such reconsideration has been rendered necessary.

23. Any proposal before the meeting may be amended by the omission or addition of a word or words
Amendments. or by both.

24. No amendment shall be proposed which would in effect constitute a direct negative to the original motion, and every amendment must be relevant to the motion upon which it is moved.

25. No amendment shall be proposed which substantially raises a question already disposed of by the meeting, or which is inconsistent with any resolution already passed by it.

26. An amendment, the substance of which has been disposed of in part, may be modified by its proposer so as to retain only the part not so disposed of.

27. The order in which amendments of which previous notice has been given are to be brought forward shall be determined by the Chairman.

28. When an amendment has been moved and seconded, it shall, unless ruled out of order, be stated from the Chair, and the debate may then proceed on the original motion and the amendment together.

29. If an amendment is negatived, the original motion shall again be stated from the Chair, and, subject to the foregoing rules, any other amendment thereto which is in order may then be proposed.

30. If an amendment is carried, the motion as amended shall be stated from the Chair, and may then be debated as a substantive question, to which the further amendments to the original motion which are in order and so far as they shall be applicable, may be proposed, subject to the foregoing rules, and such further amendments shall be disposed of in the same manner as the original amendment.

31. Any member desiring to speak shall rise in his place and address himself to the Chair.

Rules of debate.

32. When two or more members rise to speak, the member who first catches the eye of the Chairman shall be entitled to speak first.

33. No member may speak twice to a question before the Senate, except in explanation or (in the case of a mover) in reply.

34. Any motion or amendment standing in the name of a member who is absent from the meeting, or who declines to move it, may be moved by any other member.

35. No speech shall ordinarily exceed ten minutes in duration, provided that the mover of a resolution, when moving the same, may speak for twenty minutes.

36. Any motion or amendment not seconded shall not be discussed further, and no entry thereof shall be made in the minutes.

37. Any motion or amendment may be withdrawn by leave of the Senate.

38. Any matter before the Senate may be referred for consideration and report to one or more of the following bodies:—

Reference to other authorities. The University Council, the Academic Council, the Faculties, the Boards of Studies.

39. When the Chairman has ascertained that no other member, entitled to address the meeting, desires to speak, the mover of the original motion may reply upon the whole debate.

40. A debate may be closed by the motion "That the question be now put, being proposed, seconded, and considered" and the question shall be put forthwith without further amendment or debate. The mover shall however be given a right of reply after a closure motion is passed.

41. The Chairman may, at any stage in the proceedings, at his own discretion or at the request of a member, explain the scope and effect of the motion or amendment which is before the meeting. He may also, at the conclusion of a debate, sum up the debate if he so desires.

42. If the Chairman desires to take an active part in a debate he shall vacate the Chair until the vote on that debate shall have been taken. During such time the Chair shall be taken by any member to whom the work is delegated by the Chairman and who has not already taken part in the debate and waives his right to do so. The acting Chairman shall, during the debate in question, exercise all the ordinary rights of the Chairman.

43. Any member may, with the permission of the Chairman, rise, even while another is speaking, to explain any expressions used by himself which may have been misunderstood by the speaker; but he shall confine himself strictly to such explanation.

44. Any member may call the Chairman's attention to a point of order, even while another member is addressing the meeting, but no speech shall be made on such point of order.

45. The Chairman may direct any member, whose conduct is in his opinion grossly disorderly, to withdraw immediately from the Senate, and any member so ordered to withdraw shall do so forthwith and shall remain absent during the rest of the day's meeting.

Power of Chairman in case of disorder.

46. The Chairman may, in the case of grave disorder arising in the Senate, suspend any sitting for a time to be specified by him.

47. No member shall be entitled to vote in any division unless he is present when the question is put.
Voting.

48. As soon as a debate upon a question is concluded, the Chairman shall put the question to the Senate.

49. On putting any question to the vote, the Chairman shall call for an indication of the opinion of the Senate by a show of hands in the affirmative and in the negative, and shall declare the result as so indicated. The Chairman shall have a vote, and in the case of an equality of votes he shall have a casting vote in addition.

50. Any six members may then demand a division except on a motion for which, under Rules 14, 15 and 17, previous notice is not required.

51. The Chairman shall thereupon give such direction for effecting the division as he shall consider expedient. The names of the members who vote, for or against the motion or decline to vote, shall be recorded.

52. If no division is demanded, any member shall have the right to dissent and to have the fact of his dissent recorded, provided such dissent be announced as soon as the Chairman shall have declared the result of the voting.

53. While the Senate is dividing, members can speak only to raise a point of order.

54. Questions touching the affairs of the University may be put to the Chairman, and shall be sent in writing to the Registrar so as to reach him fifteen clear days before the meeting.
Questions.

55. The Vice-Chancellor may disallow any question which in his opinion ought not to be put in the public interests or in the interests of the University, or as contravening the provisions or spirit of the laws, or for other material reasons, and may alter and amend any question which is not in accordance with the Standing Orders, or which is in his opinion injudiciously worded.

56. The Chairman may, at his discretion, postpone the reply to a question to a subsequent meeting.

57. By permission of the Senate, a member may amend in writing a question of which he has given notice and put it as amended.

58. In putting any question no argument or opinion shall be offered, nor shall any facts be stated except so far as may be necessary to explain such question.

59. Replies to such of the questions as are to be answered shall be issued to all the members five clear days before the day of meeting, and shall be recorded in the minutes of the meeting.

60. It shall not be necessary to read the questions and answers at the meeting of the Senate. But at the meeting the questions answered shall be called in the serial order in which they appear in the agenda paper, when any member may, before the next question is called, put any supplementary question arising directly out of the answer given. Thereupon the Vice-Chancellor may disallow the supplementary question under Rule 55 or decline to answer the same without notice, or the Vice-Chancellor or at his request a member of the University Council or the Registrar or the Head of an institution or a Professor of the University may answer it.

61. (i) A committee of the whole Senate may be appointed by a resolution, "That the Senate do now resolve itself into a Committee of the Whole".

Committee of the Senate. (ii) The Vice-Chancellor shall be Chairman of such committee, unless he is unwilling to act, in which case any other member may be voted to the Chair.

(iii) A member may speak more than once on any question.

(iv) A motion need not be seconded.

(v) The Chairman shall have a vote, and in the case of an equality of votes, a second or casting vote.

(vi) When the matters referred to the committee have been disposed of, the report of the committee shall at once be proposed to the Senate for adoption.

(vii) When the matters so referred have not been disposed of, the Senate, having resumed and having received a report of the committee to the effect that the matters have not been fully disposed of, may appoint a future day for the committee to resume its sitting.

62. (i) The Senate may refer any matter to a Select Committee consisting of five or more members, of whom one shall be appointed Chairman.

Select committees. (ii) The Chairman shall have a vote, and in the case of an equality of votes, a casting vote.

(iii) The report of a Select Committee shall be in writing signed by the Chairman and by all the members of the Committee, or a majority of them, but any member of a Select Committee may record his views in a separate minute.

(iv) A Select Committee may, for the purpose of obtaining information, invite any person to be present at its sitting.

63. (i) All elections under Section 20 (c) of the Act shall be by ballot except those which are specially governed by other rules in this behalf. In all cases of election,

Election. other than those specifically provided for, the candidates shall be nominated in writing and the nomination paper handed to the Chairman. If no more candidates are nominated than there are vacancies to be filled, the Chairman shall declare those candidates to be elected. If the number of candidates exceeds the number of vacancies, a vote shall be taken by ballot.

(ii) In the case of a single appointment, a ballot shall be taken, in which each member shall only be entitled to give one vote, and the candidate or candidates receiving the smallest number of votes shall be withdrawn. Another ballot between the remaining candidates shall then be taken, and this procedure shall continue until the number of candidates is reduced to two. There shall be then a final ballot, and the candidate receiving the higher number of votes shall be considered to be duly elected: provided that if at any stage of the ballot a candidate obtains an absolute majority of votes, the ballot shall cease.

If in any ballot, owing to an equality of votes, all the candidates but one would be eliminated by this procedure, a fresh ballot shall be taken, and if a similar equality again occurs, the Chairman shall give a casting vote.

If in any ballot there is an equality of votes among all the candidates a fresh ballot shall be taken. If the equality be not removed the Chairman shall give a casting vote, and the candidate receiving this vote shall be regarded as duly elected; with this exception, it shall be a necessary and sufficient condition for election that a candidate obtains an absolute majority of votes, and should this occur at any stage, the ballot shall cease.

(iii) In all cases of contested election for two or more appointments each member shall be entitled to give as many votes as there are appointments to be filled, but shall not give more than one vote for one person. The candidates who obtain the largest number of votes shall be elected, except when by reason of equality of votes the number of such candidates is in excess of the number of appointments to be filled; in this case a fresh ballot shall be taken among those whose equality of votes has caused such excess. If the result of this ballot leaves the matter still undecided as to one or more of the appointments, the Chairman may decide who among the candidates found to have equal votes on the second ballot shall be appointed; or the Chairman may, at his discretion, give such directions for further ballot as the circumstances of the case may justify.

64. Any of these rules may be suspended for the time being on motion being made, with or without notice, provided that a quorum shall be present, and that such motion shall have the concurrence of at least two-thirds of the members present.

Suspension of rules.

65. Persons desirous of admission to the Senate Hall during the sittings of the Senate shall make application to the Registrar.

Admittance of strangers.

66. The Chairman may, at any time during the sitting of the Senate, direct that all strangers withdraw.

67. (i) A journal shall be kept containing a brief abstract of the proceedings of the Senate. This journal shall be submitted as soon as possible after each meeting to the Chairman for his confirmation and signature.

Record of proceedings.

(ii) Within a month after a meeting of the Senate the Registrar shall, under the direction of the Council, post a printed copy of the minutes of such meeting, attested by the Chairman, to the address of each member.

(iii) In the event of no exception being taken by any member who was present at the meeting to the correctness of the minutes within ten days of the posting by the Registrar, the same shall be deemed to be correct.

(iv) If exception be taken within the time aforesaid to any portion of the minutes, such portion shall be brought forward at the next meeting of the Senate for confirmation by such of the members as were present when the business to which the minutes refer was transacted.

(v) If in any such recorded minutes, speeches of members are quoted or the substance of such speeches is given, a proof copy of such record shall be sent to the members concerned, who shall thereupon return it within five days with their corrections, if any.

(vi) A copy of the abstract proceedings shall be published in the official Gazette as soon as possible after the meeting.

B.—Rules of Business of the University Council

1. A statement of important communications received (including all orders of Government) and of important orders and communications issued from the office shall be prepared for each month before the tenth day of the succeeding month, and circulated to members of Council.

Circulation of communications.

2. Members may call for and inspect such official papers as they may desire by notice to the Registrar.

Power to inspect papers.

3. The ordinary meeting of the Council shall be held on the second Saturday of each month, unless for any unavoidable reason the Vice-Chancellor fixes any other Day of meeting.

4. A preliminary statement of business to be transacted at a meeting shall be sent to the members Agenda of meetings. ten days before the meeting.

5. Notice by members of subjects to be included in the agenda shall be sent so as to reach the Registrar not later than Notice of propositions. twelve days before the meeting.

6. Any proposition of which notice has not been given Proposition without notice. may be moved by any member, if permission is granted by the Council.

7. Amendments, if any, relating to subjects mentioned in the agenda shall be sent to the Registrar within five days after the receipt of the agenda. Amendments.

8. A supplementary list of such amendments and other urgent subjects arising after the issue of the first list of subjects Supplementary agenda. shall be supplied to each member before the meeting.

9. The Chairman shall be the sole judge of any point of order arising. Point of order.

10. Every question shall be decided by a majority of the votes of the members present. In the case of an equality of votes, the Chairman shall have a casting vote in addition to his own. Voting.

11. Any member who dissents from a decision of the Council and expresses a desire to send a note of dissent may send up a note of dissent within three days after the meeting; and the note, together with such remarks as the Chairman of the Council Notes of dissent by members. meeting may make thereon, shall be circulated with the proceedings of the meeting.

12. Proceedings of each meeting of the University Council shall be drawn up and circulated to members within a week of the meeting. If any member desires to suggest any correction as to what actually was decided at the meeting, a note shall be sent by him to the Registrar within three days of the receipt of the proceedings. Such resolutions as have thus been objected to

shall be placed before the next meeting for confirmation, and other matters shall be taken to be passed finally, provided that action may be taken in anticipation of confirmation in urgent cases.

After confirmation, the proceedings shall be printed and copies sent to Government and to the members of the Senate.

The proceedings of all meetings shall be filed and bound along with printed copies thereof.

13. A note of questions decided by circulation shall *be recorded in the minutes book of the University Council.
Resolution by circulation.

C.—Rules of Business of the Academic Council

1. Any member who wishes to move a resolution at a meeting shall forward a copy of the resolution to the Registrar so that it reaches him not less than thirty-five clear days before the date of the meeting.
Notice of resolution. A member who has forwarded a resolution may, by giving written notice which shall reach the Registrar not less than seven clear days before the date fixed for the despatch of the agenda paper, withdraw the resolution.

2. The Registrar shall cause each resolution of which notice has been given and which has not since been withdrawn under Rule 1 to be placed on the agenda paper.
Agenda of meetings.

3. Not less than twenty-one clear days before the date of every meeting, the Registrar shall issue to every member an agenda paper specifying the day and hour of the meeting and the business to be brought before the meeting:

Provided that the non-receipt of the agenda paper by any member shall not invalidate the proceedings of the meeting:

Provided also that the Vice-Chancellor may bring any business which in his opinion is urgent before any meeting with shorter notice or without placing the same on the agenda paper.

4. Any member wishing to move an amendment to a resolution on the agenda paper of any meeting shall forward a copy of the same to the Registrar so that it reaches him not less than fifteen clear days before the day of the meeting at which the resolution is to be moved.
Amendments.

5. The Registrar shall, on the receipt of amendments given in accordance with Rule 4, prepare a completed agenda paper showing all the resolutions and amendments and shall forward a copy of it to each member not less than five clear days before the meeting.

6. In the absence of the Vice-Chancellor from a meeting of the Academic Council, the members present shall elect a Chairman from amongst their number.

7. At a meeting of the Academic Council, the following shall be the order of business:—

- Business at meetings. (1) Any motion for a change in the order of business as stated in the agenda paper.
 (2) Official business.
 (3) Business brought forward by members of the Academic Council.

8. The procedure at meetings of the Academic Council as to matters not herein specifically provided for shall be regulated generally by the Rules of Business of the Senate in so far as they may be applicable.

D.—Rules of Business of the Faculties

1. Meetings of a Faculty shall be convened by the Dean with the previous permission of the Vice-Chancellor, or on the written requisition of any eight members of the Faculty.

2. Not less than a fortnight's notice shall be given of each meeting. A member of a Faculty may bring before a meeting of the Faculty (except a special meeting convened on requisition) any matter within its purview by giving not less than a week's notice to the Dean. The agenda paper shall be sent to the members of the Faculty not less than three days prior to the meeting. Notices of amendments, if any, shall reach the Dean at least a day prior to the meeting.

3. The conduct of business at a meeting of a Faculty shall be regulated according to the Rules of Business of the Senate and the Academic Council in so far as they may be applicable.

4. In regard to any point of order or question of procedure the decision of the Chairman shall be final.

E. Rules of Procedure at Convocation

A Convocation for the purpose of conferring degrees, presided over by the Chancellor or the Pro-Chancellor or in the absence of both by the Vice-Chancellor, shall be held annually at Mysore on such date as may be fixed by the Chancellor. The following shall be the rules of procedure:—

1. All those whose names appear in the list of successful candidates for any of the degrees of the University shall receive their respective degrees *in person* or *in absentia* at any Convocation held after the publication of such lists.

Degree to be taken at
a Convocation.

2. No candidate who has already been admitted to a degree and has been awarded his diploma shall be admitted at Convocation a second time to the same degree notwithstanding that he may have become qualified in an additional group or branch or in an additional language. An endorsement shall be made upon his diploma setting forth the further examination passed by him with dates and class, if any.

3. (i) A candidate for a degree *in person* must submit to the Registrar his application for admission to the degree in the prescribed form so that it may reach him fifteen clear days before the date fixed for the Convocation. No person shall be admitted to the Convocation who has not thus applied.

Application for
admission to a degree.

(ii) A candidate who, having sent in his application for a degree *in person*, fails to appear at the Convocation, shall be charged a fee of Rs. 5 on admission to a subsequent Convocation, which will be an addition to the special fee prescribed in the following clause if admission to the degree *in absentia* is applied for.

(iii) A candidate for a degree *in absentia* must apply for a degree at a Convocation and submit his application in the prescribed form so that it may reach the Registrar, fifteen clear days before the date fixed for the Convocation. The fee for admission to the degree *in absentia* is Rs. 10 which shall be remitted with the application or paid into a Mysore Government Treasury and the Treasury receipt attached to the application.*

(iv) A woman candidate for a degree who is precluded by custom from appearing in public may, by order of the University Council, be admitted to a degree *in absentia* without any fee, provided that she applies to the Registrar in the prescribed form so that the application may reach him fifteen clear days before the date of the Convocation.

(v) It shall however be competent for the Vice-Chancellor for satisfactory reasons shown to grant prior to the Convocation a provisional certificate to a candidate who is eligible for a degree, subject to such candidate being admitted to the degree.

* The same fee as for one degree, viz., Rs. 10, shall be levied for two degrees.

4. Candidates for degrees shall sign a declaration in the following form, before they are admitted to the several degrees for which they may have been recommended:—

Declaration to be signed.

“We hereby solemnly declare and promise that, if admitted to the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Commerce, Bachelor of Teaching, Bachelor of Engineering, Bachelor of Medicine and Bachelor of Surgery, Master of Arts, Master of Science, for which we have been recommended, we shall, in our daily life and conversation, conduct ourselves as befits members of this University; that we shall to the utmost of our capacity and opportunity support the cause of morality and sound learning; and that, as far as in us lies, we shall uphold and advance the social order and the well-being of our fellow-men.”

In the case of professional degrees, the following shall be added to the declaration:—

“That we shall faithfully and carefully fulfil the duties of the professions to which we may be admitted by virtue of our degrees, that we shall on all occasions maintain their purity and reputation and that we shall never deviate from the straight path of their honourable exercise by making our knowledge subservient to unworthy ends.”

5. The candidates shall wear such costume as may be prescribed, as well as the gowns and hoods pertaining to their respective degrees, and shall occupy their respective seats before the proceedings begin.

6. There shall be a meeting of the Senate preliminary to the Convocation at which the Registrar shall read the report of the Council containing lists of candidates recommended for admission to the various degrees.

7. The Dean of each Faculty, or in his absence the senior member present, shall then move that the persons so recommended for the degrees related to his Faculty be admitted to the several degrees for which they have been recommended.

8. On the passing of these motions, the Chancellor, the Pro-Chancellor, the Vice-Chancellor and the members of the Senate shall pass in procession to the place where the Convocation is to be held, the candidates and others in the hall remaining standing till they have taken their seats.

9. After the Chancellor, the Pro-Chancellor, the Vice-Chancellor and the members of the Senate have taken their places, the Chancellor, or if authorised by him the Vice-Chancellor, shall say:—

“This Convocation of the University of Mysore has been called to confer degrees upon the candidates who, in the examinations held for the purpose, have been certified to be worthy of the same. Let the candidates now stand forward.”

10. Then, the candidates standing, the Chancellor, or if authorised by him the Vice-Chancellor, shall put to them the following questions:—

Question.—Do you sincerely promise and declare that, if admitted to the degrees for which you are severally candidates, and for which you have been recommended, you will, in your daily life and conversation, conduct yourselves as becomes members of this University?

Answer.—I do promise.

Question.—Do you promise that to the utmost of your opportunity and ability you will support and promote the cause of morality and sound learning?

Answer.—I do promise.

Question.—Do you promise that you will, as far as in you lies, uphold and advance the social order and the well-being of your fellow-men?

Answer.—I do promise.

In the case of candidates for professional degrees, the following additional question shall be put:—

Question.—Do you promise that you will faithfully and carefully fulfil the duties of the Teaching, Medical and Engineering professions, that you will on all occasions maintain their purity and reputation, and that you will never deviate from the straight path of their honourable exercise by making your knowledge subservient to unworthy ends?

Answer.—I do promise.

11. Then the Chancellor shall say: “Let the candidates be now presented.”

12. Then the candidates shall be presented to the Chancellor by such Deans of the Faculties or Heads of colleges or other members of the Senate as may be nominated for this purpose by the Vice-Chancellor, the candidates having previously received their diplomas from the Registrar. When all the candidates have been presented, the Chancellor shall say to the candidates:—

“By virtue of the authority vested in me as Chancellor of the University of Mysore, I admit you to the degree (degrees) in this University; and in token thereof you have been presented with this (these) diploma (diplomas), and I authorise you to wear the hood (hoods) ordained as the insignia of the said degree (degrees).”

13. When all the candidates have been presented, the Chancellor shall sign the record of the degrees which have been conferred.

14. An address suitable to the occasion will then be delivered by some members of the Senate or other person nominated by the Chancellor.

15. The Chancellor shall then dissolve the Convocation, and the Chancellor, the Pro-Chancellor and the members of the Senate shall retire in procession in the same order in which they entered.

16. The following shall be the gowns and hoods prescribed for members of the Senate and for different degrees of the Mysore University:—

Degree	Gown	Hood
Members of Senate.	Black silk or alpaca: shape similar to Oxford M.A.: three-inch gold coloured border of braid or silk from each shoulder to the bottom in front.*	
B.A.	Black, similar to Oxford B.A. or Cambridge B.A.	Black with yellow lining.
B.Sc.	Do. Do.	Yellow with black lining.
B.Com.	Do. Do.	Black with emerald green lining.
M.A.	Black, similar to Oxford or Cambridge M.A.	Black with yellow lining and yellow border.
M.Sc.	Do. Do.	Yellow with black lining and black border.
B.T.	Similar to B.A. Do.	Black with blue lining.
B.E.	Do. Do.	Black with terra cotta lining.
M.B.B.S.	Black, similar to Oxford or Cambridge B.A.	Black with crimson lining.
D.Litt.	White silk with sky-blue border.	Sky-blue.
D.Sc.	Crimson silk with dark blue border.	Dark red.
LL.D.	Crimson silk with old gold facing.	Scarlet silk with old gold lining.

* The academical gown and hood of other Universities will be recognised for this purpose.

The Barrister's wig and gown is not considered as coming within the description of "academic costume" for purposes of attendance at a Convocation or other academic functions.

CHAPTER II

DEGREES, COURSES OF STUDY AND SCHEMES OF EXAMINATIONS

DEGREES AND DIPLOMAS

THE University now confers the following degrees and diplomas :—

DEGREES

Bachelor of Arts (B.A.)—Pass and Honours.
Bachelor of Science (B.Sc.)—Pass and Honours.
Bachelor of Engineering (B.E.).
Bachelor of Medicine and Surgery (M.B.B.S.).
Bachelor of Teaching (B.T.).
Master of Arts (M.A.).
Master of Science (M.Sc.).

DIPLOMAS

Diploma in Medical Practice (L.M.P.).
Diploma in Agriculture (L.A.G.).
Diploma in Sericulture (L.S.).
Diploma in Veterinary Science (L.V.Sc.).
Diploma in Engineering (Civil) (L.E. Civil).
Diploma in Engineering (Mechanical) (L.E. Mech.).
Diploma in Engineering (Electrical) (L.E. Elec.).
Diploma in Engineering (Automobile) (L.E. Auto.).
Diploma in Teaching (L.Ed.).
Diploma in Commerce (L.Com.).
Diploma in Prints and Engraving (L.P.E.).
Diploma in Printing and Binding (L.P.B.).
Diploma in Pharmacy (L.Ph.).
Diploma in Music (L.Mus.).
Diploma in Home Science (L.H.Sc.).
Diploma in Painting and Drawing (L.P.D.).

COURSES OF STUDY AND SCHEMES OF EXAMINATIONS

Intermediate Examination

CONDITIONS OF ADMISSION*

(*Vide Ordinance 8*)

COURSES OF STUDY (GENERAL)

(*Vide Ordinances 55 to 59*)

COURSES OF STUDY (DETAILED)

[*Vide Ordinance 217 (a)*]

(a) Intermediate Examination in Arts

I. ENGLISH

The texts for non-detailed study shall be two in number, and none set for any one examination shall be repeated within three years.

Certain of the set books which have to be studied in detail may be retained from year to year.

The books for detailed study shall include one play of Shakespeare, and texts in prose and poetry.

General English shall comprise *Precis*, *Expansion*, *Paraphrase of Poetry*, *Idiomatic Usage*, *Parsing and Analysis* and other grammatical tests.

The scope of the syllabus in General English shall be that indicated by the following standard text-books on Composition:—

G. Chettur, M.A.: *College Composition* (Longmans).

Glover: *Practical Course of English Composition* (Parts I and II) (Longmans).

In all the three papers set in the examination, the number of questions set shall be larger than the number the candidate is required to answer.

All papers in the examination shall be so set that candidates shall be able to obtain full marks without answering questions relating to purely literary criticism or scholarship.

* No one will be allowed to enter for the Intermediate Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

II. SECOND LANGUAGE

(1) *Kannada*

The course of study shall consist of poetry and prose both ancient and modern, and drama with grammar for detailed study and prescribed modern prose books for non-detailed study.

(2) *Telugu*

The books to be set under this head shall include the following:—

(a) One selection from the *Mahabharata* or other early classic.

(b) One selection from the mediæval poets or a drama.

(c) One modern prose work.

The candidates are expected to show an acquaintance with the elements of grammar, including the elements of prosody and rhetoric of the language.

(3) *Tamil*

(a) Poetry—about 300 stanzas.

(b) Prose—about 120 pages of classical prose.

(c) Grammar.

(d) Composition—about 200 pages for prose for non-detailed study.

(4) *Urdu*

(a) Text and Grammar.

(b) Composition (Essay writing).

(5) *French*

The course of study shall consist of—

(a) One prose work, one drama and a selection of verse for non-detailed study.

(b) Translation from English into French and from French to English.

(c) One book of prose and one of verse for detailed study.

(d) Grammar.

(6) *Sanskrit*

(a) Detailed study of books prescribed from time to time.

(b) Grammar and Prosody as in Macdonell's *Sanskrit Grammar for Beginners*, or Kale's *Smaller Sanskrit Grammar*.

(c) Translation of unseen passages from Sanskrit into English and *vice versa*.

(7) *Persian*

- (a) Detailed study of books prescribed from time to time.
- (b) Grammar and Prosody.
- (c) Translation of unseen passages from Persian into English and *vice versa*.

(8) *Latin*

Detailed study of prescribed Texts, Grammar, Translation from English into Latin. Unseen translation from Latin into English.

III. OPTIONAL SUBJECTS

(1) *Selected Language*

(a) Old and Middle Kannada

Same as for Kannada taken as Second Language.

(b) Modern Kannada

Same as for Kannada taken as Second Language.

(c) Telugu

Same as for Telugu taken as Second Language.

(d) Tamil

Same as for Tamil taken as Second Language.

(e) Urdu

Same as for Urdu taken as Second Language.

(f) Sanskrit

Same as for Sanskrit taken as Second Language.

(g) Persian

Same as for Persian taken as Second Language.

(h) Arabic

1. Detailed study of books prescribed from time to time.
2. Grammar and Prosody.
3. Translation of unseen passages from Arabic into English and *vice versa*.

Note.—The standard for any language taken as a selected language shall be the same as the standard for the same language taken as second language, in respect of syllabus, text-books and examination.

(i) *Hindi*

- (a) Text-books for detailed and non-detailed study.
- (b) Grammar.
- (c) Translation from English into Hindi and *vice versa*.

Note 1.—Candidates are expected to express their ideas clearly and grammatically in Hindi.

Note 2.—Answers to be written in Devanagari script.

(2) History

The course of study shall comprise:—

- (1) History of Greece and Rome to 14 A.D.
(History of Greece to the death of Alexander the Great and History of Rome to the death of Augustus.)
- (2) British History from 1485: Political and Constitutional.
(British Political and Constitutional History from 1485 A.D. with special reference to the growth of the Empire and of English Political Institutions.)

Books for Study

1. Ramsay Muir: *British History* (George Phillip & Son).
2. Masterman: *History of the British Constitution*.

Books for Reference

1. Carter and Mears: *History of Britain* (Clarendon Press, Oxford, 1937).
2. Trevelyan: *History of England*, Part II.
3. Woodward: *A Short History of Expansion of the British Empire*.
4. Warner and Martin: *Groundwork of British History*.
5. Lingard: *British History*.

(3) Geography

The course of study shall comprise:—

1. (a) Climatology.
Weather and climate, temperature, pressure, winds and rainfall—distribution of temperature (horizontal and vertical) and pressure—planetary winds and local winds—weather types—climatic types and their distribution.
- (b) Oceanic waters.
Their surface movements and their effects.
2. Land forms, their origin and evolution.
General characters of the earth's crust—nature and classification of rocks—the internal and external forces modifying the crust—duration of geological time—the action of geological agents, denudation, transport, deposition and deformation—origin and evolution of land forms such as plains, valleys, plateaus, hills and mountains.
3. Earth Regions.
General features of distribution, land, sea, mountains, plateaus, plains, climates, vegetation, animals, and man—major natural regions of the world and their characteristics.

4. Earth Resources.
Agricultural, pastoral, and mineral resources—trade and transport (to be treated with special reference to India).
5. Map Work.
Maps, their construction, nature, interpretation and uses.
6. Practical Work.
 - (a) Elementary study of the more common projections.
 - (b) Interpretation of topographical maps, weather maps, etc.
 - (c) Diagrammatic representation of geographical data.
 - (d) Determination of latitudes and longitudes.
 - (e) Description and identification of some common minerals and rocks.
7. Excursions to places of geographical interest.

Book for Study

C. S. Fox: *Physical Geography for Indian Students*
(Macmillan and Co.).

(4) *Logic and Scientific Method*

- (1) Deductive Logic.
- (2) Scientific Method.

Books for Study

Latta and Macbeath: *Elements of Logic*.

Jepson: *How to Think Clearly*.

Or

Mander: *Clear Thinking*.

Wolf: *Essentials of Scientific Method*.

(5) *Economics*

1. Modern Industry.
2. Economic History of England.

The following is the detailed course of study in Economics:—

(a) *Modern Industry*

- I. Fundamental Ideas.—
Wants, efforts, wealth, production, exchange, money, price, income, earning and spending, saving and capital, competition and monopoly.
- II. Stages in the Evolution of Modern Industry.
- III. Common Commodities.—
 - (1) Circumstances affecting their production and carriage.
 - (2) Their chief places of production.

- (3) Food Supply: wheat, rice, meat, coffee, tea and sugar.
- (4) Raw materials: cotton, wool, jute, iron, silk, hides and skins.
- (5) Sources of power: coal, oil and electricity.
- IV. Economic Organisation.—
 - (a) Farming, (b) Mining, (c) Manufacturing, (d) Transport, (e) Commerce, (f) Finance (Money and Banking).
- V. Forms of Business.—
 - (a) Capitalistic—Proprietary; Partnership; Joint Stock;
 - (b) Co-operative; (c) Socialistic.
- VI. Characteristics of Modern Industry.—
 - (a) Division of Labour, (b) Localisation, (c) Mass production, (d) Combinations, (e) Risk-bearing, (f) Organised Markets, (g) Advertising, (h) Labour Problems.
- VII. Government and Industry.—
 - (a) Forms of State Aid, (b) Commercial Policy, (c) National Finance, (d) Economic Legislation.

Books for Study

1. Marshall and Lyon: *Our Economic Organisation* (Macmillan).
2. Lehfeldt: *Descriptive Economics* (Oxford University Press).
3. Banerji: *Indian Economics* (Macmillan).

(b) Economic History of England

Introductory—

I. Character of Economic History, its importance. Stages of economic development: Topical divisions.

II. Pre-Norman England.—

- (1) England before Roman Occupation.
- (2) Economic Organisation of England during Roman Occupation.
- (3) Economic life during Anglo-Saxon Occupation.

III. The Norman Conquest. Its economic aspects.

Period I:—From the Norman Conquest to the close of the 13th century: Village Economy—

- (1) Agriculture—The manorial system.
- (2) Industry—Beginnings of the town system.
- (3) Trade—Organisation: the State and Trade.
- (4) Money.
- (5) The State and Economic Life.

—From the close of the 13th century to early 16th century: Town Economy—

- (1) Agriculture—The Black Death and its effects; Solutions for the acuteness of the labour problem.
- (2) Industry and Towns—Merchant and craft guilds.
- (3) Trade—The staple and merchants of the staple.
- (4) Money and Credit.
- (5) State and Economic Life—Edward III's Legislation: Richard II's Mercantile Measures.

Period III:—From the early years of the 16th century to the close of the 18th century: Era of Mercantilism and Nation Economy—

Mercantilism and its character: Measures and results.

- (1) Agriculture.
- (2) Industries.
- (3) Trade.
- (4) Money and Banking.
- (5) State in relation to Economic Life.

Period IV:—From the close of the 18th century to the outbreak of the Great War: The Era of the Industrial Revolution.—

- (a) Economic conditions in England on the eve of the Industrial Revolution.—
- (b) The Economic Revolution: the Industrial Revolution; the Agrarian Revolution; the Revolution in Transport.—

(i) Industry:—

- (1) Main industries of the country.
- (2) Changes in structure and organisation: Joint Stock Companies; Division into processes; Concentration.
- (3) Formation of working class organisations: Trade Unions; Friendly Societies; Co-operative Societies.

(ii) Agriculture:—

Abolition of Corn Laws; Depression and revival; Importation of foreign corn; Revival of small-scale farming.

(iii) Transport and Commerce:

- (1) Improved means of communication: Roads and canals; Railways; Steam navigation; Air Transport.
- (2) Wider markets and changes in the character of exports and imports.
- (3) Free Trade; Abolition of navigation laws.

(c) Currency and Banking: (1) State of British Currency at the close of the 18th century. (2) The

Bank of England : Suspension of Cash Payments.
The Bank Charter Act. Use of Cheques and Currency.

(d) The State in relation to the economic* life of the people :

- (1) National Finance. (2) Factory Legislation.
(3) Poor Relief. (4) Commercial Policy.

Period V:— Brief review of the post-war developments.

Books for Study

1. Townsend Warner: *Landmarks in English Industrial History* (Blackie & Sons).
2. Worts: *Modern Industrial History* (Hodder and Stoughton).

(6) *Mathematics*

1. Algebra.
2. Calculus.
3. Trigonometry.
4. Geometry.

The following is the detailed course of study in Mathematics:—

1. Algebra :

Ratio and Proportion. Variation. Theory of Indices. Logarithms and their application to arithmetical computation. Simple surds. Quadratic equations. Theory of Quadratic Functions. Series in A.P., G.P. and H.P. Notion of convergence with illustrations from G.P. Summations involving Σn , Σn^2 , Σn^3 . Arithmetico-Geometric Series. Partial Fractions (elementary). Interest and Annuities. Permutations and Combinations. Binomial Theorem for a positive integral index and easy application of the theorem for any rational index. Easy Graphs. Solution of simultaneous quadratic equations. Indeterminate equations of the first degree.

2. Calculus :

Graphical representation of a function. Gradient of a curve at a point. Differentiation of elementary functions. Rules of differentiating the sum, difference, product and quotient of functions, and of a function of a function. Second derivatives. Applications to simple problems in Geometry and Mechanics including maxima and minima. Integration as the inverse of differentiation. Integration by substitution and by parts. The definite integral. Applications to find areas and volumes in simple cases.

3. Trigonometry :

Measurement of angles. Trigonometric Functions and their relations to one another. Simple Equations. Solution of

Triangles. Heights and Distances in one plane. Use of Trigonometric Tables. Sine and Cosine Graphs. Addition and Multiplication Formulæ. Properties of Triangles and Circles connected with them. Inverse Trigonometric Functions. Limits and Approximations. Heights and Distances in different planes. Application of Logarithms to Trigonometric computation.

4. Geometry (Theoretical and Practical):

(i) *Theorems in Plane Geometry—*

1. The rectangle contained by the diagonals of a cyclic quadrilateral is equal to the sum of the rectangles contained by its opposite sides.

2. The perpendiculars from the vertices of a triangle on the opposite sides meet in a point called the orthocentre, and the distance of each vertex from the orthocentre is twice the perpendicular distance of the circumcentre from the side opposite the vertex.

3. The three medians of a triangle meet in a point and this point is a point of trisection of each median and also of the line joining the circumcentre to the orthocentre.

4. The circle through the middle point of the sides of a triangle passes also through the feet of the perpendiculars of the triangle and through the middle points of the three straight lines joining the orthocentre to the vertices of the triangle.

5. If a perpendicular drawn from the vertex of a triangle is produced to meet the circumcircle, the distance of this point of intersection from the base is equal to the distance of the orthocentre of the triangle from the base.

6. The feet of the perpendiculars drawn on the sides of a triangle from any point on the circumcircle of the triangle are collinear.

7. Geometrical theorems corresponding to the following identities:—

$$K(a + b + c \dots) = Ka + Kb + Kc \dots$$

$$(a \pm b)^2 = a^2 \pm 2ab + b^2.$$

$$a^2 - b^2 = (a + b)(a - b)$$

$$(a + b)^2 - (a - b)^2 = 4ab.$$

$$(a + b)^2 + (a - b)^2 = 2(a^2 + b^2).$$

8. The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides, according as the angle contained by these two sides is obtuse, right, or acute. The difference in the case of inequality is twice the rectangle contained by one of the two sides and the projection of it on the other.

9. If D is a point in the side BC of a triangle such that

$$BD = \frac{1}{n} BC,$$

$$\text{then } (n-1) AB^2 + AC^2 - n \cdot AD^2 + \left(1 - \frac{1}{n}\right) BC^2.$$

10. If two chords of a circle cut one another, the rectangle contained by the segments of the one is equal to the rectangle contained by the segments of the other: and conversely, if two straight lines cut one another so that the rectangle contained by the segments of the one is equal to the rectangle contained by the segments of the other, the four extremities of the straight lines are concyclic.

11. If from a point without a circle a secant and a tangent are drawn to the circle, the rectangle contained by the whole secant and its segment external to the circle is equal to the square on the tangent.

12. If from any point without a circle two straight lines are drawn one of which cuts the circle and the other meets it, and if the rectangle contained by the whole secant and its parts external to the circle equals the square on the line which meets the circle, this line is a tangent to the circle.

13. Definition and elementary theorems connecting antecedents and consequents.

14. A given straight line can be divided internally or externally in a given ratio at one and only one point.

15. A straight line drawn parallel to one side of a triangle cuts the other two sides produced (if necessary) proportionally; and the converse.

16. If the vertical angle of a triangle is bisected internally or externally, the bisector divides the base internally or externally into segments which have the same ratio as the other sides of the triangle; and the converse.

17. In equal circles, angles whether at the centres or at the circumferences, have the same ratio as the arcs on which they stand.

18. Triangles and parallelograms having equal altitudes are as their bases.

19. If two triangles are equiangular, their corresponding sides are proportional; and the converse.

20. If two triangles have one angle of the one equal to one angle of the other and the sides about the equal angles proportional, the triangles are similar.

21. Two triangles are similar, if the sides of the one are respectively parallel or perpendicular to the sides of the other.

22. If two triangles have two sides of the one proportional to two sides of the other and an angle in each opposite to one corresponding pair of these sides equal, the angles opposite to the other pair are either equal or supplementary.

23. If from the right angle A of a right-angled triangle ABC , AD is drawn perpendicular to BC , then (i) AD is the mean proportional between BD and DC ; (ii) BA is the mean proportional between BD and BC ; (iii) CA is the mean proportional between CD and CB .

24. If two triangles are similar, their corresponding lines (such as medians, altitudes, inradii, circumradii, etc.) are proportional.

25. If two triangles have one angle of the one equal to one angle of the other, their areas are proportional to the rectangles contained by the sides about these equal angles. Similarly for parallelograms having one angle of the one equal to one angle of the other.

26. Similar triangles are to one another as the squares on their corresponding sides.

27. Two similar polygons can be divided into the same number of similar triangles similarly placed; and the converse.

28. The perimeters of two similar polygons are to each other as their corresponding sides and their areas are proportional to the squares on corresponding sides.

29. In a right-angled triangle, any rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the other two sides.

30. If four straight lines are proportional and a pair of similar rectilineal figures are similarly described on the first and the second and also a pair of similar rectilineal figures are similarly described on the third and the fourth, the figures are proportional.

31. If the vertical angle of a triangle is bisected internally by a straight line which cuts the base, the rectangle contained by the sides of the triangle equals the rectangle contained by the segments of the base together with the square on the straight line which bisects the angle.

32. If from the vertical angle of a triangle a straight line is drawn perpendicular to the base, the rectangle contained by the sides of the triangle equals the rectangle contained by the perpendicular and the diameter of its circumcircle.

(ii) *Solid Geometry*—

1. Any two straight lines which intersect each other, or are parallel, lie in a plane.

2. If a straight line is perpendicular to each of two intersecting straight lines at their point of intersection, it is perpendicular to the plane containing them.

3. If a straight line is perpendicular to each of three concurrent straight lines at their point of intersection, the three straight lines are in one plane.

4. Two straight lines perpendicular to the same plane are parallel; and the converse.

5. If two parallel planes are cut by a third plane, the lines of intersection are parallel.

6. If two straight lines are cut by parallel planes, they are cut proportionally.

7. If two intersecting planes are both perpendicular to a third plane, the common section of the first two is perpendicular to the third plane.

8. A straight line can be drawn perpendicular to each of two straight lines in space which do not intersect and are not parallel, and this straight line is the shortest distance between them.

9. If a solid angle is contained by three plane angles, any two of them are together greater than the third.

10. The plane angles which contain a solid angle are together less than four right angles.

(iii) *Practical Geometry*—

Construction of the circumscribed, inscribed and escribed circles of a triangle. Medial section. Construction of regular polygons. Division of finite straight lines in a given ratio and construction of similar figures.

Construction of triangles from given data, and division of triangles, quadrilaterals and polygons in a given ratio. Areas of polygons and problems relating thereto. Simple calculations relating to regular solids.

(iv) *Analytical Geometry*—

Co-ordinates. Point dividing in a given ratio the join of two points. Centroid of the triangle in terms of the co-ordinates of the vertices. Distance between two points. Area of triangle in terms of the co-ordinates of the vertices. Loci and equations. The standard forms of the equation of the straight line. Angle between two given lines. Change of origin. Length of perpendicular from a given point on a given line. Bisectors of angles between two given lines. Simple locus problems on the straight line. Equation of the circle (Standard Forms).

(Rectangular axes are assumed throughout.)

Books for Study

1. *Algebra*: V. B. Naik and V. A. Apte: *Higher Algebra* (Arya Bhushan Press, Poona).
2. *Trigonometry*: (i) B. B. Bagi: *Plane Trigonometry* (Published by B. B. Bagi, Reddy Housing Society, Dharwar).
(ii) K. S. Patrachari and S. A. Mani: *Junior Trigonometry for Colleges* (Longmans).
3. *Plane Geometry*: G. A. Srinivasan and C. Krishnamachari: *Junior Geometry for Colleges* (Longmans).
4. *Solid Geometry*: Hall and Stevens: *School Geometry* Part IV only.

5. *Analytical Geometry*: B. C. Maloney: *Analytical Geometry*.
6. *Calculus*: (i) V. M. Gaitonde: *Introduction to Calculus* (Bombay Book Depot, Girgaom, Bombay).
(ii) R. C. Fawdry and C. V. Durell: *Calculus for Schools* (Arnold & Co.).
(iii) D. Ferroli and Krishnamurthy Rao: *Co-ordinate Geometry and Calculus* (Bangalore Press).
(iv) G. W. Caunt: *Elementary Calculus* (Oxford University Press).
7. N. M. Shah and Desai: *College Algebra* (Karsondas, Narandas & Sons, Surat).
8. M. P. Ramasāstry: *Analytical Geometry for Beginners* (Otturmai Office, Saidapet).

Books for Reference

1. K. R. Gunjekar: *An Introduction to the Calculus*, Parts I and II (Oxford University Press).
2. D. C. Pavate and Bhagawat: *The Elements of Calculus* (Third Edition, Tutorial Press, Bombay).

(7) *Physics*

The course will include a more detailed study of the matter relating to Physics included in the S.S.L.C. syllabus for Elementary Science and the following:—

Mechanics.—Fundamental units of length, mass and time and their measurement. Units of velocity and acceleration. Relations between displacement, velocity and acceleration of a particle moving in a straight line with constant acceleration. Resolution and composition of velocities and acceleration; motion down an inclined plane. Laws of motion: momentum, force, energy, work, power. Atwood's machine. The parallelogram of forces: resolution and composition of forces in a plane. Systems of parallel forces. Moment of force. Moment of a couple: condition of Equilibrium of a body under the action of two couples in a plane. Centre of gravity. Simple machines. The simple pendulum treated experimentally: the measurement of "g". Measurement of time by the pendulum clock. Comparison of masses by balances, including the common steel-yard. Hooke's Law. Spring balances.

Hydrostatics.—Nature of fluid pressure: pressure at a point in a fluid. Principle of Archimedes: its experimental verification. Floating bodies. Measurement of specific gravity and comparison of densities by weighing: by the hydrometer; and in the case of liquids, by balanced columns. The pressure of a gas: Boyle's Law, Barometers. Manometers: pressure gauges. Hydraulic Press. Air Pumps. Water Pumps.

Sound.—Production and Propagation. Wave motion. Reflection and refraction of sound waves. Velocity of sound in air

and its determination. Musical notes: pitch, quality and intensity. Vibration of strings and air columns treated experimentally.

Heat.—Temperature and quantity of heat distinguished. Variation of sizes of bodies with change of temperature: common examples. Thermometers employing thermal expansion of solids, liquids and gases. Measurement of thermal expansion. Thermal expansion of gases: Charles' Law. Measurement of quantity of heat: units: specific heat. Simple thermal laws relating to change of state, latent heat. Calorimetry: practical measurement of specific heat and latent heat. Vapour pressure and its measurement. Boiling point and its measurement, Melting points and boiling points of solutions: simple facts. Convection of heat: common examples. Conduction of heat; simple laws and measurements. Definition of conductivity. Radiation treated simply and experimentally: absorption and reflection of heat; effect of quality of surface on emission, absorption and reflection: practical applications of these facts. Newton's Law of Cooling. Comparison of specific heats by the method of cooling. Heat, a form of energy: dynamical equivalent of heat: conservation of energy. Conversion of heat into work: the working of the steam engine and the internal combustion engine simply explained.

Light.—Rectilinear propagation of light. Shadows; Eclipses. Pin-hole camera. Simple photometry. Inverse square law of illumination. Laws of reflection and refraction: total reflection. Applications of laws of reflection and refraction to plane and spherical surfaces. Lenses. Derivation and applications of formulæ connecting the positions of object and image in the cases of mirrors and lenses. Real and virtual images. Magnification. Applications to the following optical instruments: Photographic camera; projection lantern; simple magnifier; spectacles; microscopes; telescope. Dispersion; variation of refractive index with colour; the spectroscope, emission and absorption spectra; solar spectrum.

Magnetism.—Properties of magnets; magnetic fields: shape of field surrounding straight bar magnets and bent magnets. Suspended magnet; compass needle. Earth's magnetic field. Uniform magnetic fields; field strength; action of magnetic field on magnet in the field. Definition of unit pole and of unit intensity of magnetic field. Definition of magnetic moment of a magnet; comparison of magnetic moments and of intensities of magnetic fields; magnetometers (deflection and vibration). Simple magnetic properties of iron and steel; permanent magnets; magnetic induction. Magnetic property of electric current.

Electricity.—Electric currents; existence of electric currents recognised by their magnetic effects. Definition of unit current strength in terms of magnetic intensity. The electro-magnet. Galvanometers (moving needle); tangent galvanometer. Conductors and non-conductors. The idea of electromotive force:

the relation of electromotive force in a conductor to current strength; resistance; Ohm's Law. Comparison of resistances and electromotive forces; Wheatstone's Bridge; the potentiometer. Heating effects of current: work done by current flowing under electromotive force. Practical units of electric measurement of current strength, electromotive force, resistance, work and power. Mutual action between magnets and electric current; suspended coil galvanometer, ammeters and voltmeters. Faraday's experiments on induced currents. Simple qualitative laws of electro-magnetic induction. Simple description of action of dynamo. Description of action of electric bells, telegraph sounder, microphone and telephone. Direct current motor. Incandescent filament lamp. Electrolysis and Faraday's Laws of Electrolysis.

Books for Reference

Glazebrook's *Cambridge Physical Science Series*, so far as they relate to the subject-matter of the syllabus.

Note.—(i) There will be no practical examination in Physics.

(ii) Candidates for the examination should be required to produce a certificate of having satisfactorily completed a course of practical laboratory work in the subject, signed by the Superintendent of the Intermediate College.

(iii) The course in Physics should consist of two lectures per week of one hour each and one practical lesson per week of two and a half hours.

(8) *Chemistry*

Air, Boyle's Law, Charles' Law.

Hydrogen, oxygen, water. Laws of chemical combination.

Gay Lussac's Law of Combining Volumes.

Atoms and Molecules. Avogadro's Hypothesis.

Symbols and formulæ, valency, radicles. Chemical equations and calculations.

Hydrogen peroxide and ozone.

Halogens and their hydracids. Electrolysis. Sodium hypochlorite, potassium chlorate.

Elementary knowledge of oxidation and reduction.

Sulphur: Rhombic and monoclinic varieties. Effect of heat on sulphur. Sulphuretted hydrogen, sulphur dioxide, sulphur trioxide, sulphuryl chloride, sulphurous and sulphuric acids, sodium thiosulphate.

Solubility of solids and gases in water. Solubility curves. Henry's Law of Gas Solubility.

Nitrogen, magnesium nitride, ammonia, oxides of nitrogen, nitrosyl chloride, nitrous and nitric acids.

Endothermic and exothermic compounds. Thermal dissociation. Reversible reactions.

Phosphorus: red and white varieties; phosphine, oxides of phosphorus, chlorides of phosphorus, phosphorous oxychloride, phosphorus and phosphoric acids, structural formulæ.

Neutralisation. Equivalent weight of acids, bases and salts. Normal solutions. Acid, basic and normal salts. Water of crystallisation.

Boron: Boric acid, borax.

Silicon: Silica, silicon tetrafluoride, sodium silicate, glass.

Carbon: Allotropy, elementary knowledge of the distillation of wood and coal, methane, ethane, acetylene, carbon monoxide and dioxide, carbon disulphide, carbon tetrachloride, calcium carbide, cyanogen, hydrocyanic acid, potassium cyanide, ferrocyanide. Double salts and complex salts.

Combustion, elements of gas analysis.

General methods of determining equivalent weights, atomic weights and molecular weights.

Chief sources, preparation, properties, and use of the following metals:—

Sodium, potassium, copper, silver, gold, magnesium, calcium, strontium, barium, zinc, mercury, aluminium, tin, lead, arsenic, chromium, manganese and iron.

The preparation and properties of the more important compounds of the above metals.

Elementary knowledge of the periodic classification of elements.

Students are expected to have a knowledge of the process of manufacture of the following:—

Hydrochloric, nitric, and sulphuric acids, aluminium, gold, iron, lead, zinc, sodium hydroxide, sodium carbonate.

Practical.—Cutting, bending and drawing out glass tubing. Preparation and study of the properties of hydrogen, oxygen, chlorine, hydrogen chloride, ammonia, nitrous and nitric oxides, nitric acid, sulphur dioxide, boric acid, alum, and ferrous ammonium sulphate. Composition by volume of air, ammonia and sulphur dioxide.

Density of carbon dioxide.

Solubility of solids in water. Solubility curves.

Equivalent weight of a metal (magnesium, iron, lead or aluminium).

Acidimetry and alkalimetry—estimation of acids, sodium hydroxide, sodium carbonate.

Simple exercises on the use of standard solutions of permanganate, thiosulphate and iodine. Volumetric analysis.

Qualitative analysis of simple salts.

Books for Study

Holmyard: *Inorganic Chemistry* (Arnold).

Mitra, L. M.: *Text-book of Inorganic Chemistry* (Mondal Bros., Calcutta).

Smith: *Laboratory Outline of Elementary Chemistry* (Bell).

Albuquerque, G.: *Intermediate Practical Chemistry* (Basel Mission Press, Mangalore).

Note.—(i) The course in practical work should closely follow the study of the theoretical portions in the lecture classes.

(ii) The course in Chemistry should consist of two lectures per week of one hour each and one practical lesson per week of two and a half hours.

(9) *Biology*

(a) *Elementary Botany*—

A study of the parts of a flowering plant. Root and shoot systems.

Work of the roots, stem and leaves. Form and structure of the parts as suited to function. An elementary knowledge of transpiration, photosynthesis, respiration. Behaviour of parts of plants to gravity and light.

Flowers.—Arrangement, parts and their functions, pollen and ovule, cross and self-pollination, fertilisation and dispersal of fruits and seeds.

Life-history of the following plants:—

Chlamydomonas, Ulothrix, Spirogyra, Bacteria, Cystopus, Mucor, Agaricus, Riccia, Marchantia, Moss, Adiantum, Selaginella and Cycas.

(b) *Elementary Zoology*—

A study of the important features in the structure, functions and development of the following forms:—

(1) Amœba, (2) Polystomella, (3) Lithocircus, (4) Euglena, (5) Compromonas, (6) Volvox, (7) Monocystis, (8) Paramœcium, (9) Vorticella, (10) Stylonychia, (11) Opalina, (12) Hydra, (13) Obelia, (14) Earthworm, (15) Starfish, (16) Fresh water mussel, (17) Prawn, (18) Cockroach, (19) Amphioxos, (20) Dog Fish, (21) Frog, (22) Rabbit.

The practical work will include a thorough examination of the microscopical preparations of the organisms, and their complete dissections and preparations of slides. A knowledge of the skeleton will be required.

(c) *General*—

Minute structure and division of cells and nuclei. Spermatogenesis and cogenesis in frog and earthworm. Reduction, division and formation of micro and megaspores in onion.

Food—

(1) Of plants—ordinary plant; beans, cuscuta, sandal.

(2) Of animals—solid, liquid. Derived from plants or animals; consequent adaptations in animals, mouth with teeth or sucking apparatus, weapons for attack, etc.

Defence and attack—

(1) Plants—Acacia thorns, nettles, hairs, insectivorous plants.

(2) Animals—Claws, tusks, shields, poison, etc.

Interdependence of organism collectively and individually.

Carbon dioxide from animals used by plants; insects pollinating flowers, and animals dispersing fruits and seeds. Animals depending on plants for food.

Plants depending on plants, leguminous nodules, nostoc, lichens, sandal.

Animals depending on animals.

Hermit crab, sea anemone and crab. Head louse. Flea, Tape worm.

Symbiosis, parasitism.

Adaptation to environments—

(1) Plants—Xerophytic, Hydrophytic, Littoral vegetation, Lithophytic.

(2) Animals—Tadpole and frog, web foot in swimming, birds, fins, bats, whale, etc. Colour in animals and plants.

Sex—

Hermaphrodite

Unisexual	{	Monœcious	}	Examples from animals and plants.
		Diœcious		

Polygamous.

Reproduction—

Vegetative, parthenogenesis, sexual (examples from plants and animals). Alternation of generation. Races. Varieties. Species. Basis of classification. Simple examples of cross breeding—Pea, fowl. Mendelism—Simple. 1 : 2 : 1 or 3 : 1 ratio. Geographical distribution. Multiplication of individuals. Checks. Struggle for existence. Natural selection. Mutation—*Oenothera*. Evolution. Evidence in support. Usefulness of a knowledge of Biology.

Books for Study

1. James G. Needham : *General Biology*.
2. T. J. Parkar : *Lessons in Elementary Biology*.
3. J. A. Thompson : *The Science of Life*.
4. R. E. Lloyd : *An Introduction to Biology*.
5. T. J. Parkar and W. A. Haswell : *A Manual of Zoology*.

(b) Intermediate Examination in Science

I. ENGLISH

Same as for the Intermediate Examination in Arts.

II. SECOND LANGUAGE

(1) *Kannada*

Composition and texts prescribed for non-detailed study as for the Intermediate Examination in Arts.

(2) *Telugu*

Composition and texts prescribed for non-detailed study as for the Intermediate Examination in Arts.

(3) *Tamil*

Composition and texts prescribed for non-detailed study as for the Intermediate Examination in Arts.

(4) *Urdu*

Composition and texts prescribed for non-detailed study as for the Intermediate Examination in Arts.

(5) *French*

The course of study shall consist of—

1. One prose work, one drama and a selection of verse for non-detailed study.

2. Translation from English into French and from French to English.

(6) *Sanskrit*

Translation and texts as for the Intermediate Examination in Arts.

(7) *Persian*

Translation and texts as for the Intermediate Examination in Arts.

(8) *Latin*

Detailed study of prescribed texts, Grammar, Translation from English into Latin.

ELEMENTARY MATHEMATICS

(For candidates of the one-year I.Sc. Course not taking Mathematics as an optional subject.)

1. Problems involving laws of indices, simple surds, logarithms and use of tables.

2. Arithmetic and Geometric Progressions.

3. Co-ordinates, Graphs—with particular reference to the following types:—

(1) $y = mx + c$, (2) $y = ax^2 + bx + c$, including ideas of maximum and minimum, (3) $y = ax^n$, (4) $y = a/x$ and (5) $x^2 + y^2 + 2gx + 2fy + c = 0$.

4. Graphical solution of quadratic equations.

5. Trigonometric functions. Use of tables. Heights and distances (problems involving right-angled triangles in one plane only). Radian Measure. Graphs of $\sin x$ and $\cos x$.

6. Properties of similar figures and their numerical and graphical applications. Division of a straight line in assigned ratios.

7. Definition of plane: line perpendicular to a plane: angle between two planes, two lines, a plane and a line.

8. Relation between sides, areas of faces and surfaces, volumes of the following solids:

Cube, Prism, Pyramid, Sphere, Cylinder and Cone.

(The subject will be taught for 4 hours a week in the Junior Intermediate class only and shall provide for intensive practical work.)

N.B.—Proofs of formulæ and of theorems are not expected. Attention will be devoted mainly to numerical and graphical work.

III. OPTIONAL SUBJECTS

(1) *Mathematics*

- | | | |
|-----------------|---|---|
| 1. Algebra | } | Same as for the Intermediate Examination in Arts. |
| 2. Calculus | | |
| 3. Trigonometry | | |
| 4. Geometry | | |

(2) *Physics*

Same as for the Intermediate Examination in Arts.

(3) *Chemistry*

Same as for the Intermediate Examination in Arts.

(4) *Biology*

Same as for the Intermediate Examination in Arts.

(5) *Botany*

1. Living and non-living things and their main features: organic and inorganic substances.

Plants and animals: differences and resemblances; similarity of vital functions such as feeding, respiration, movement, response to stimuli and reproduction.

2. The green leaf: its external and internal structure; photo-synthesis; transpiration; leaf form and internal structure as well suited to carry on the above two functions. Adaptations to facilitate and check transpiration, leaf adjustments to light, phototropism. Arrangement of the leaves on the plant. Struggle for light among plants. Climbing plants and epiphytes. General leaf forms. Stipules and their work. Modifications of leaves and stipules.

3. Root: its external form, internal structure; work of roots—absorption and fixation—root cap, root hairs, region of root

hairs; work of root hairs; osmosis. Root pressure. Study of the soil. Its structure and nature of the soil in relation to the water contents. Branching of the roots, elongation and growth of roots in thickness. Different kinds of roots; modification of roots; response of roots to gravity, light and water.

4. Stem: internal structure; work of the stem—supporting and conducting. Path of the sap current; intercellular spaces, lenticels; increase of stem in thickness; cork formation, sap wood and heart wood; modification of stems, response of the stem to gravity and light. Stems of water plants.

5. Flowers: parts of a flower; functions of different parts; pollen grains; pollen tube, ovule; egg cell; fertilisation. Seed formation. Parts of a seed. Arrangements of the parts of a flower; insect visitors; cross and self-pollination. Advantages of cross pollination: adaptations for cross pollination; wind pollination and inconspicuous flowers. Inflorescences. Seeds; fruits; kinds of fruits, seed and fruit dispersal and its advantages; struggle for existence. Survival of the fittest; variety, species, heredity and evolution.

Study of the following families: Anonaceæ, Magnoliaceæ, Mælvaceæ, Leguminosæ, Myrtaceæ, Rubiaceæ, Compositæ, Convolvulaceæ, Solanaceæ, Acanthaceæ, Labiateæ, Euphorbiaceæ, Liliaceæ, Amaryllidæ, Palmæ.

Some plant products—Starch, oils, sugars, alkaloids, gums, resins, coutchouc, fibres, the plants and the parts of the plant producing them.

6. Apex of the stem and the root. Meristem, cell structure; cell division; changes seen in the cell contents and the nature of the cell wall.

Life-history: Chlamydomonas; structure locomotion, all the life functions carried out by the single cell. A brief account of volvocales: origin of sex, increase in plant body and division of labour. Origin of Soma. Ulothrix. Spiragrya, Fucus. Simplest land plants such as Liverworts, Mosses, Ferns, Lycopods, Selaginella and Cycas. Seed plants.

7. Bacteria: structure and life-history, fermentation, enzymes, symbiosis, pathogenic bacteria, fungi—saprophytes, parasites, mucor, phytophthora, yeast plants. Fermentations, parasitic flowering plants, insectivorous plants.

Practical Work.—Students are expected to examine with hand lens the external features of all the plants and to be able to refer the plants to their families. They should be able to prepare free-hand sections of the various parts of the plant body for microscopic examination and identify the prepared slides of the forms mentioned in paras 6 and 7. Special attention must be given to the class experimental demonstrations of the various physiological functions of the plant organs.

Books for Study

1. Strasburger: *A Text-book of Botany*.
2. Transley: *Elements of Plant Biology*.
3. Ganoug: *Text-book of Botany*, Parts I and II.
4. K. Rangachari: *A Hand-book of Botany for India*.
5. Fritch and Salisbury: *Botany for Students of Medicine and Pharmacy*.

Note.—The course of study in Botany shall consist of two lectures per week of one hour each and a practical lesson of two and a half hours per week.

(6) Zoology

The chief characteristics of living organisms; plants and animals—their resemblances and differences. Elementary knowledge of cell structure and cell division. Elementary facts about different kinds of animal tissues (epithelia, blood, connective tissue, cartilage, bone, glandular tissue, muscle and nervous tissue). Fossils and their significance. Theory of evolution treated in an elementary manner.

A study of the important features in the structure, habits, life-history and mutual relations of the leading types included in the following phyla: Protozoa, Cœlenterata, Platyhelminthes, Nematoda, Annelida, Echinodermata, Arthropoda, Mollusca and Chordata. Animals of economic importance will receive greater attention.

The practical work includes a microscopical examination of the organisms, specially prepared slides to illustrate parts or entire structures of the types; dissections of the earthworm, cockroach, fish, frog, lizard, pigeon and rabbit so as to illustrate the principal anatomical characters. A complete examination of the external characteristics of the jelly fish, sea anemone, corals, tape and round worms, a marine worm, centipede, scorpion, house fly, flea, bee, bed bug, butterfly, crab, prawn, fresh-water mussel, pond snail, sepia, specimens of echinodermata together with a general acquaintance with the more important skeletal features of the vertebrate types, is included.

Books for Study

1. Parker and Haswell: *Manual of Zoology*.
2. Parker and Bhatia: *An Elementary Text-book of Zoology for Indian Students*.

Books for Reference

1. G. C. Bourne: *Comparative Anatomy of Animals*, 2 volumes.
2. Alexander Meek: *Essentials of Zoology*.
3. J. Graham Kerr: *Zoology for Medical Students*.

4. H. Osborn: *Economic Zoology*.
5. Borradaile: *The Animal and its Environment*.

Note.—The course of study in Zoology shall consist of two lectures per week of one hour each and a practical lesson of two and a half hours per week.

(7) *Geology*

(a) *Physiography*—

An elementary course of lectures on the following:—

The Earth as a planet; its general relations to the other members of the Solar system; hypothesis as to the origin of the Earth; form, size, and density of the Earth; its movements and effects.

The atmosphere and the hydrosphere: general considerations such as their composition, temperature and movements. The lithosphere—the chief constituents of the Earth's crust. Condition of the interior of the Earth.

Agents of geological change: the hypogene and epigene agents, manner and results of their action especially as influencing earth sculpture.

Climate: their causes and distribution; glacial epochs.

(b) *Crystallography and Mineralogy*—

Symmetry: planes and axes of symmetry; laws of crystallography; the common holohedral crystal forms and combinations; Weiss and Naumann's notations.

The chief characteristics of the most important rock-forming minerals; occurrence and alteration products.

(c) *Petrology*—

Origin and classification of all the more important types of rocks; their composition and alteration; general principles of metamorphism.

Mode of occurrence and distribution of rock types in Mysore.

(d) *Structural and Field Geology*—

Elementary knowledge of structural features exhibited by rock masses such as bedding, dip, strike, folds, faults, cleavage, foliation and joints; construction and interpretation of simple geological maps and sections: relation between geological structure and scenery; water supply.

(e) *Stratigraphy and Palæontology*—

Stratigraphical classification; the meaning of unconformity and overlay; imperfection of the geological record: fossils, their mode of formation and value in Geology and also in the Biological sciences; the general characteristics of the great systems of stratigraphy in Europe; elementary knowledge of the Geology

of India with special reference to the geological history of Mysore; the order of succession of animal and plant life on the surface of the globe.

Practical Work.—Preparation and interpretation of physical and geological maps; and the drawing of sections across them. Identification and description of minerals, rocks and fossils.

Books for Study

1. A. Geike: *A Class Book of Geology*.
2. Rutley: *Mineralogy Revised by Read*.
3. Harker: *Petrology for Students*.
4. Dr. Smeeth: *Geological History of Mysore*.

Note.—The course of study in Geology shall consist of two lectures per week of one hour each and a practical lesson of two and a half hours per week.

(8) *Geography*

Same as for the Intermediate Examination in Arts.

SCHEME OF EXAMINATION

[*Vide Ordinance 218 (a)*]

(a) Intermediate Examination in Arts

				Max. Marks
I. ENGLISH				
1.	Poetry and Drama	.. ..	3 hours	70
2.	Prose: detailed and non-detailed	.. ..	..	70
3.	General English	.. ..	..	60
4.	Class examinations	.. ..	..	10
II. SECOND LANGUAGE				
(1) <i>Kannada</i>				
1.	Composition, non-detailed text-books, and Translation*	.. ..	3 hours	100
2.	Text-books for detailed study and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10
(2) <i>Telugu</i>				
1.	Composition, non-detailed text-books and Translation*	.. ..	3 hours	100
2.	Text-books for detailed study and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10

	Max. Marks
* Composition and non-detailed text-books.	.. 75
Translation from English to the Second Language	.. 25

				Max. Marks
(3) <i>Tamil</i>				
1.	Composition, non-detailed text-books and Translation*	.. ..	3 hours	100
2.	Text-books for detailed study and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10
(4) <i>Urdu</i>				
1.	Composition, non-detailed text-books and Translation*	.. ..	3 hours	100
2.	Text-books for detailed study and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10
(5) <i>French</i>				
1.	Texts, Grammar and Translation	.. ..	3 hours	100
2.	Texts and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10
(6) <i>Sanskrit</i>				
1.	Translation and non-detailed text-books	.. ..	3 hours	100
2.	Text-books for detailed study and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10
(7) <i>Persian</i>				
1.	Translation and non-detailed text-books	.. ..	3 hours	100
2.	Text-books for detailed study and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10
(8) <i>Latin</i>				
1.	Texts, Grammar and Translation from English into Latin	.. ..	3 hours	100
2.	Texts and Grammar	.. ..	..	100
3.	Class examinations	.. ..	..	10

	Max. Marks
* Composition and non-detailed text-books	.. 75
Translation from English to the Second Language	.. 25

III. OPTIONAL SUBJECTS

(1) *Selected Language*

(a) Old and Middle Kannada

			Max. Marks
1.	Composition and non-detailed text-books	3 hours	100
2.	Text-books for detailed study and Grammar	"	100
3.	Class examinations		10

(b) Modern Kannada

1.	Composition and non-detailed text-books	3 hours	100
2.	Text-books for detailed study and Grammar	"	100
3.	Class examinations		10

(c) Telugu

1.	Composition and non-detailed text-books	3 hours	100
2.	Text-books for detailed study and Grammar	"	100
3.	Class examinations		10

(d) Tamil

1.	Composition and non-detailed text-books	3 hours	100
2.	Text-books for detailed study and Grammar	"	100
3.	Class examinations		10

(e) Urdu

1.	Composition and non-detailed text-books	3 hours	100
2.	Text-books for detailed study and Grammar	"	100
3.	Class examinations		10

(f) Sanskrit

1.	Translation and non-detailed text-books	3 hours	100
2.	Text-books for detailed study and Grammar	"	100
3.	Class examinations		10

(g) Persian			Max. Marks
1. Translation and non-detailed text-books	3 hours		100
2. Text-books for detailed study and Grammar	"		100
3. Class examinations			10

(h) Arabic			
1. Translation and non-detailed text-books	3 hours		100
2. Text-books for detailed study and Grammar	"		100
3. Class examinations			10

(i) Hindi			
1. Detailed text-books and Grammar	3 hours		100
2. Non-detailed text-books and Translation	"		100
3. Class examinations			10

(2) *History*

1. First paper (History of Greece and Rome to 14 A.D.)	3 hours		100
2. Second paper (British History from 1485—political and constitutional)	"		100
3. Class examinations			10

(3) *Geography*

1. Climatology, Land forms (their origin and evolution) and Map work ..	3 hours		90
2. Earth Regions and Earth Resources ..	"		90
3. Class examinations			10
4. Class records			10

(4) *Logic and Scientific Method*

1. First paper (Deductive Logic) ..	3 hours		100
2. Second paper (Scientific Method) ..	"		100
3. Class examinations			10

(5) *Economics*

1. First paper (Modern Industry) ..	3 hours		100
2. Second paper (Economic History of England)	"		100
3. Class examinations			10

(6) <i>Mathematics</i>					Max. Marks
1.	Algebra and Calculus	..	..	3 hours	90
2.	Trigonometry and Geometry	..	..	"	90
3.	Class examinations	..	..	..	10
4.	Class records	..	..	..	10
(7) <i>Physics</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..	..	10
4.	Class records	..	..	..	10
(8) <i>Chemistry</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..	..	10
4.	Class records	..	..	..	10
(9) <i>Biology</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..	..	10
4.	Class records	..	..	..	10

Note.—In respect of Science subjects and Mathematics, the class records and class examination marks shall be added to the total of the examination marks in Part II and in the Arts subjects including compulsory languages, a statement of class examination marks shall be furnished to the Chairmen of Boards of Examiners for use solely for the decision of cases on the border line between passing and failing or between two classes.

(b) Intermediate Examination in Science

I. ENGLISH

1.	Poetry and Drama	..	..	3 hours	70
2.	Prose: Detailed and non-detailed	..	..	"	70
3.	General English	..	..	"	60
4.	Class examinations	..	..	..	10

II. SECOND LANGUAGE

(1) *Kannada*

Composition, non-detailed text-books and Translation*	..	..	3 hours	100
Class examinations	..	..	..	5

				Max. Marks.
Composition and non-detailed text-books	..	..	..	75
Translation from English to the Second Language	..	..	..	25

				Max. Marks
(2) <i>Telugu</i>				
Composition, non-detailed text-books and Translation*	3 hours			100
Class examinations				5
(3) <i>Tamil</i>				
Composition, non-detailed text-books and Translation*	3 hours			100
Class examinations				5
(4) <i>Urdu</i>				
Composition, non-detailed text-books and Translation*	3 hours			100
Class examinations				5
(5) <i>French</i>				
Texts, Grammar and Translation from English into French and from French into English	3 hours			100
Class examinations				5
(6) <i>Sanskrit</i>				
Translation and non-detailed text-books	3 hours			100
Class examinations				5
(7) <i>Persian</i>				
Translation and non-detailed text-books	3 hours			100
Class examinations				5
(8) <i>Latin</i>				
Texts, Grammar and Translation from English to Latin	3 hours			100
Class examinations				5

III. OPTIONAL SUBJECTS

(1) *Mathematics*

1. Algebra and Calculus	3 hours	90
2. Trigonometry and Geometry	"	90
3. Class examinations		10
4. Class records		10

	Max. Marks
* Composition and non-detailed text-books ..	75
Translation from English to the Second Language ..	25

					Max. Marks
(2) <i>Physics</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10
(3) <i>Chemistry</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10
(4) <i>Biology</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10
(5) <i>Botany</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10
(6) <i>Zoology</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10
(7) <i>Geology</i>					
1.	First paper	..	..	3 hours	90
2.	Second paper	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10
(8) <i>Geography</i>					
1.	Climatology, Land forms (their origin and evolution) and Map work	..	..	3 hours	90
2.	Earth Regions and Earth Resources	..	..	"	90
3.	Class examinations	..	..		10
4.	Class records	..	..		10

Note.—In respect of Science subjects and Mathematics, the class records and class examination marks shall be added to the total of the examination marks in Part II.

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide* Ordinances 60 and 61]**B.A. Degree Examination**

CONDITIONS OF ADMISSION*

[*Vide* Ordinance 10]

COURSES OF STUDY (GENERAL)

[*Vide* Ordinances 68 to 70]

COURSES OF STUDY (DETAILED)

[*Vide* Ordinance 217 (b)]

I. COMPULSORY ENGLISH

The same text-books shall be set for the B.A. and the B.Sc.

II. SECOND LANGUAGE

(1) *Kannada*

Text-books in Modern Kannada shall be prescribed.

(2) *Telugu*

Books set for non-detailed study shall consist of—

(a) One selection from the *Mahabharatamu* or other early classics,

(b) One selection from the mediæval poets, and

(c) One modern prose work.

The examination shall comprise such tests as epitomisation and expansion and partly of subjects for composition drawn from the subject-matter of the prescribed text-books.

(3) *Tamil*

Composition based on prescribed text-books.

(4) *Urdu*

Composition based on prescribed text-books.

(5) *Sanskrit*

The course of study shall comprise—

(1) Classical Prose.

(2) One prescribed drama.

(3) Translation exercises from Sanskrit to English and from English to Sanskrit.

* No one is allowed to enter for the B.A. Degree Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

The passage for translation into English will be selected from the prescribed text-books.

(6) *Persian*

The prescribed books shall comprise Prose and Poetry. The examination shall comprise questions on Prose and Poetry and passages for translation from Persian into English and *vice versa* to be selected from the prescribed text-books.

(7) *Arabic*

(1) Prescribed books—Poetry and Prose.

(2) Translation.

The examination shall comprise questions on the prescribed texts and passages for translation from Arabic into English and *vice versa*.

(8) *French*

The course of study shall comprise—

Prescribed texts; Grammar and Translation from English into French and from French into English. Passages for translation from French into English shall be chosen from the prescribed texts.

(9) *Latin*

The course of study shall comprise—

Prescribed texts, Grammar and Translation from English into Latin.

III. OPTIONAL SUBJECTS

(1) *English*

The course of study shall comprise—

- (1) Drama,
- (2) Poetry, and
- (3) Prose.

(2) *Kannada*

The course of study shall comprise—

- (1) Poetry, including Poetics and Prosody.
- (2) Prose and Drama, including Dramaturgy.
- (3) History of Language and History of Literature—a general view.

Text-books to be prescribed in Poetry, Prose and Drama.

Kannada Kaipidi to be the text-book for Poetics (including Dramaturgy and Prosody), History of Language and History of Literature.

Note —Modern Kannada not to be included under Vernacular.

(3) *Telugu*

The course of study shall comprise—

(1) The study of set books representative of the several periods of Telugu Literature.

(2) The History of Telugu Literature with special reference to set books.

(3) The History of Telugu Language as illustrated by the set books.

(4) The elements of Telugu Grammar including Prosody and Poetics.

(5) Composition and Translation.

(4) *Tamil*

The course of study shall comprise—

(1) Poetry, including Grammar, Poetics and Prosody.

(2) Prose and Drama including Dramaturgy.

(3) History of Language and History of Literature.

(4) Translation into English and *vice versa*.

(5) *Urdu*

The course of study shall comprise—

(1) Urdu Prose, Urdu Poetry.

(2) Grammar, Rhetoric, Prosody, History of Literature.

(3) Translation from English into Urdu and *vice versa*.

Note.—An elementary knowledge of either Persian or Hindi is compulsory.

(6) *Sanskrit*

(i) *Sahitya*—Classical Literature and Criticism

The course of study shall comprise—

(1) *Classical Prose*.—Selection from the works of Dandi, Bana, Subandhu, etc.

(2) *Classical Poetry*.—Selections from the works of Kalidasa, Bharavi, Magha, etc.

(3) One prescribed Drama and Poetics.

Note.—The student will be expected to possess a knowledge of the elements of Prakrit, Grammar and Dramaturgy.

(4) Grammar including a select portion of *Siddhanta Kaumudi*.

(5) History of Classical Literature and Criticism with special reference to books prescribed under (1), (2) and (3).

(ii) *Vedic Studies*

The course of study shall comprise—

(1) Selections representative of the several stages of Vedic Literature: Mantras, Brahmanas and Sutras.

(2) Vedic Grammar.

(3) History of Vedic Literature with special reference to books prescribed under (1).

(iii) Darsanas—Philosophical Literature

The course of study shall comprise—

(a) Selections representative of earlier philosophical literature: Upanishads or Epics.

(b) Selections representative of the Vedanta (one of the three schools) and one other philosophical system.

(c) Elements of Tarka according to prescribed text-book.

(d) History of Indian Philosophy with special reference to the books prescribed.

(7) *Persian*

The course of study shall comprise—

(1) Prose containing Fiction, Drama.

(2) Poetry.

(3) History of Language and Literature.

(4) Rhetoric, Prosody and Grammar.

Note.—An elementary knowledge of Arabic is recommended.

(8) *Arabic (Classical)*

The course is the same as for Persian Optional.

(9) *Avestan and Pahlavi (Classical)*

The course is the same as for Persian Optional.

(10) *Hindi*

The course of study shall comprise—

(1) Prescribed text-books.

(2) History of Language and Literature.

(3) Translation from Hindi into English and *vice versa*.

Note.—An elementary knowledge of either Sanskrit or Urdu (as a non-examination subject) is recommended.

(11) *History*

The course of study shall comprise—

(1) History of India, Political and Cultural, to 1300 A.D.

(2) History of India, Political and Cultural, after 1300 A.D.

(3) History of Europe, from 1500 A.D.

The following is the detailed course of study in History:—

(i) History of India, Political and Cultural.

An advanced study of the main currents of Political History, with outlines of the outstanding topics of Cultural History as indicated by the following books:

Books for Study

Srinivasachari and Ramaswami Iyengar: *History of India*, Vols. I, II and III.

Smith: *Early History of India*.

Lane-Poole: *Mediæval India*.

Roberts: *British India*.

Masson Oursel: *History of India (History of Civilization Series)*.

Books for Reference

Mackay: *Indus Civilization*.

Cambridge Indian History.

S. K. Iyengar: *Ancient India*.

C. Hayavadana Rao: *Mysore Gazetteer*, Vol. II, Part I.

Isvari Prasad: *Mediæval India*.

Edwards and Garrett: *Moghul Rule in India*.

Garrett and Thomson: *Rise and Fulfilment of British Rule in India*.

Sardesai: *Main Currents of Mahratta History*.

Havell: *Aryan Rule in India*.

(ii) History of Europe from 1500 A.D.

Books for Study

Hollings: *Europe in Renaissance and Reformation*.

Johnson: *The Age of the Enlightened Despot*.

Mariott: *Re-making of Europe*.

Hazen: *History of Modern Europe from 1789–1914 A.D.*

Books for Reference

Grant and Temperly: *Europe in the 16th Century*.

Ascendency of France.

Balance of Power.

Revolutionary France.

Modern Europe.

Europe in the 19th Century.

Ogg: *Europe in the 17th Century*.

Mowat: *Concert of Europe*.

Revington's Series.

(12) Geography

The course of study shall comprise—

- (1) Human Geography.
- (2) Political Geography.
- (3) Economic Geography.
- (4) A special subject.
- (5) Map Work.

(13) Economics

The course of study shall comprise—

- (1) General Economics I—Consumption, Production, Theory of Value and Distribution.
- (2) General Economics II—Currency and Banking, International Trade and Public Finance.

(3) Elements of Statistics.

Or

Recent Economic History of India.

Note.—In respect of General Economics, knowledge shall be expected of Indian conditions.

The following is the detailed course of study in Economics:

(1) General Economics I—

Scope and method of Political Economy. Economic Institutions. Theory of Production, Consumption, Value, and Distribution. State in relation to economic life.

Books for Study

Marshall: *Economics of Industry*.

Clay: *Economics for the General Reader*.

Henderson: *Supply and Demand*.

Silverman: *Substance of Economics*.

Cannan: *Review of Economic Theory*.

Gray: *Development of Economic Doctrines*.

Saltau: *Economic Functions of the State*.

Dobb: *Wages*.

(2) General Economics II—

Money and Banking. International Trade and Public Finance.

Books for Study

Robertson: *Money*.

The Macmillan Report.

Todd: *Mechanism of Exchange*.

Barret Whale: *International Trade*.

Dalton: *Public Finance*.

Stamp: *Fundamental Principle of Taxation*.

Clay: *Economics for the General Reader*.

Silverman: *Substance of Economics*.

(3) Elements of Statistics—

Statistical Method (not pre-supposing a knowledge of Mathematics higher than the School Final standard): Definitions of data, tabulation, averages, graphic methods, measures of dispersion, analysis of time series illustrated by statistics of production, consumption, trade, prices, wages, etc., in India. A study of the statistical organisation in India is essential.

Books for Study

Conner: *Statistics in Theory and Practice*.

Mills: *Statistical Methods*.

Rhodes: *Elementary Statistical Methods*.

Bowley: *Measurement of Social Phenomena*.

Report of the Visvesvaraya Economic Inquiry Committee.

The Salter Report on an Economic Advisory Organisation for India.

The Bowley-Robertson Report on the Economic Census for India.

Indian Census, 1931, Vol. I, Part I.

The Statistical Abstract for British India.

(4) Recent Economic History of India—

A general survey of the economic development of India in the modern age and an analysis of her principal economic problems.

Books for Study

Gadgil: *Industrial Evolution of India.*

Vera Anstey: *Economic Development of India.*

Knowles: *Economic Development of the Overseas Empire*, Volume II.

Jathar and Beri: *Indian Economics*, Vols. I and II.

(14) *Politics*

The course of study shall comprise—

- (1) Comparative Politics.
- (2) Political Theory.
- (3) Public Administration.

The following is the detailed course of study in Politics:—

(1) Comparative Politics—

I. The Origin of the State. The Family. Patriarchal and Matriarchal Theories. The Village Community, Political Integration and Political Differentiation.

II. The Ancient City State: Its beginnings: course of evolution and decay as illustrated by Sparta, Athens and Rome. Federal Experiment in Greece.

III. The Roman Empire.

IV. Mediæval Polity. The Teutonic Tribal State. The Holy Roman Empire. The Papacy. Feudalism. Mediæval Representative Institutions. Mediæval City States.

V. Absolute Monarchy and the Transition to the Modern State.

VI. The Modern National Democratic State:—

- (a) The Federal State: its chief characteristics.
- (b) Separation of Powers—The Legislature, the Executive and the Judiciary; their organization and working.
Local Government, constitution and working.
- (c) Sovereignty of the people—
 - (1) The Franchise, Electoral Methods and Minority Representation.
 - (2) Referendum, the Initiative and the Recall.
 - (3) Party Government.

- (d) Recent tendencies; weakening of the faith in democracy, and the growth of dictatorships.
(e) The League of Nations.

Books for Study

Sidgwick: *Development of European Polity*.
Strong: *Modern Political Constitutions*.
Gilchrist: *Principles of Political Science*.
G. D. H. Cole: *A Guide to Modern Politics*.

Books for Reference.

Greenidge: *Greek Constitutions*.
Greenidge: *Roman Public Life*.
Bryce: *Modern Democracies*.
Finer: *Theory and Practice of Modern Government*.
Ogg: *English Government and Politics*.
Ogg: *Government of Europe*.
Sapre: *Indian Administration*.
Kale: *Indian Administration*.

(2) Political Theory—

1. Nature and scope of political science (relation of Politics to other social sciences; methods of study).
2. Fundamental conceptions of Politics: The State Nationality and Nation; Sovereignty; Government; Law Rights; Liberty; Equality; Citizenship.
3. Origin of the State; Divine right theory; Social contract theory; Organic theory.
4. Functions of government; Individualism; Paternalism and Socialism.
5. History of Political Thought (a brief survey of political thought from Plato to the present times).

Books for Study

Leacock: *Elements of Political Science*.
Gettell: *Introduction to Political Science*.
Gilchrist: *Principles of Political Science*.

Books for Reference

Laski: *Grammar of Politics*.
Garner: *Introduction to Political Science*.
Sidgwick: *Elements of Politics*.
Willoughby: *Nature of the State*.
Dunning: *Political Thought* (three volumes and the Commemoration volume).
Coker: *Recent Political Thought*.

(3) Public Administration—

1. Introductory: Public Administration, what it means; its scope; importance of the study of public administration.

2. Theory of separation of powers; the political and administrative functions of Government.

3. The political branch of the administration; organization and powers of the Executive.

4. The central administration: History and organization of departments. The permanent services, organization and working. Relation between the political and administrative services.

5. Local government: History and organization of local governments. Local finance. Relation between local and central governments.

6. Public administration and industry.

7. Rights and duties of public servants.

8. Control over the administration: Administrative, Legislative and Judicial control.

Book for Study

Goodnow: *Comparative Public Administration*.

Books for Reference

Willoughby: *Principles of Public Administration*.

Ghose: *Public Administration in India*.

Ghouse, N.: *Comparative Administrative Law*.

Poincare: *How France is Governed*.

Harris: *Local Government in Many Lands*.

The Monographs in the White Hall Series.

(15) Philosophy

Candidates may select *one* of the following three combinations:—

(1) Psychology, Ethics, Plato's Republic.

(2) Psychology and any *two* of the following subjects: Logic, Metaphysics, Indian Philosophy, Philosophy of Religion.

(3) Psychology (General), Experimental Psychology (Theory) and Experimental Psychology (Practical).

Note.—Candidates appearing from the Maharani's College for Women are permitted to offer Philosophy of Religion as an alternative to Psychology in group (1).

The following is the detailed course of study in the several subjects in Philosophy:

General Psychology

Introductory: Scope of Psychology—Data and Methods of Purposive Psychology.

*Part I—Conative-affective Processes***Instincts—**

- The Impulses of Food-seeking, Curiosity, Herd, Sex, Play, Escape, Repulsion, Appeal, Pugnacity, Ostrich and Laughter.
- The definition of Instinct. How far are instincts innate?
- The criteria of instincts. Instinct in animals.
- The relation between Instinct and Intelligence. The relation of Pleasure and Pain to Thought and Action.

Emotions—

- Relation of Emotions to Instincts. James-Lange Theory of Emotions.
- Blended or Secondary Emotions—Derived Emotions.
- Distinction between Feelings and Emotions.
- Disposition, Temper, Temperament and Moods.
- The Effect of Glands on Personality. Marks of Introversion and Extroversion.

Character—

- The Development of Sentiments and Tastes.
- The Organization of Character.
- The Subconscious Working of the Mind.

Mental Disorder—

- Amnesia and other Dissociative Disorders.
- Functional Disorders of the Repressive Type.
- Compulsion and Obsessions.
- Mental Hygiene.

*Part II—Cognitive Processes***Cognitive Principles of Spearman—**

- Qualitative Laws of Neogenesis.
- Quantitative Principles of Energy, Retentivity and Fatigue.
- Application of the Cognitive Principles—
- Attention.
- Nature of Perception. Errors in Perception.
- Perceptual and Conceptual Thinking.
- Analysis of Judgment and Reasoning—Belief and Doubt.
- Nature of Intelligence and its Measurement.
- Memory and Imagination.

*Part III—Some General Problems***The Relation between Body and Mind.****Schools of Psychology—**

- Behaviourism *versus* the Purposive School.
- Associationism *versus* the Gestalt.

Books for Study

1. McDougall: *The Energies of Man*.
2. Spearman: *Nature of Intelligence and the Principles of Cognition* (Chapters 4, 5, 7, 9, 12, 13, 16, 19 and 20).
3. Charles Jessild: *Child Psychology*.

Books for Reference

1. Bridges: *Emotional Life of the Child*.
2. Susan Isaac: *Social Development of the Child*.

Ethics

1. Distinction between Morality and Ethics. Definition and Scope of Ethics.
2. The Relation of Ethics to Psychology, Politics, Jurisprudence, Economics, Sociology and Religion.
3. The place of Reason and Feeling in morality.
4. Fundamental Ethical Concepts: Good, Right, Duty, Obligation, Virtue, Mérit.
5. Distinction between Customary and Reflective Morality. The Relation of Custom, Law and Morality in Primitive and Advanced Societies. The Growth of Morality. (Part I, Chapters II-IX in *Ethics* by Dewey and Tufts.)
6. The Concepts of Moral Order and Progress.
7. Subjective and Objective Rightness.
8. The Moral Judgment.
9. Types of Ethical Theory—
 - (a) Theological Ethics.
 - (b) Hedonism: Psychological and Ethical, Egoistic and Utilitarian.
 - (c) Evolutionary Ethics.
 - (d) Intuitionism: Perceptual, Dogmatic and Philosophical (Sidgwick: *Methods of Ethics*). The Concept of Conscience. Growth of Conscience (Mezes: *Ethics—Descriptive and Explanatory*).
 - (e) Ethics of Kant.
 - (f) Ethics of Hegel. The Concept of Sittlichkeit.
 - (g) Ethics of Self-Realization.
10. Moral Standard and Moral Law.
11. Virtues and Vices: Wisdom, Temperance, Courage, Justice, Benevolence. Critique of Humility, Pride, Anger, Ambition, Thrift.
12. Distinction between Conduct and Character.
13. Theories of Punishment.
14. The Relation of Ethics and Metaphysics. The problems of Free Will, Immortality of the Soul and the Concept of God in their bearing on Ethics.

Books for Study

1. Mackenzie: *Manual of Ethics*.
2. Dewey and Tufts: *Ethics*, Part I.

Plato's Republic

In the study of this book, its bearing on modern problems should always be borne in mind. In this connection, Joad's *Introduction to Modern Political Theory* may be made use of.

*Book for Reference**Plato's Republic* (Jowett's Translation).*Books for Study*

1. Nettleship: *Lectures on the Republic of Plato*.
2. Lewis Campbell: *Plato's Republic*.

Logic

1. Distinction between Traditional Logic and Modern Logic. Logic as a Philosophic Discipline.
2. Relation between Logic and Language.
3. Terms. Propositions and Judgments. Syllogism. Deduction and Induction.
4. System and Order: Pre-suppositions of Logical Thinking. The Principle of Causality. Laws of Thought.
5. The Place of Hypothesis in Logical Thinking.
6. Inductive Methods as Scientific in Character.
7. Inference and Implication.
8. Scientific Method in Physical Sciences and in Social Sciences.
9. Probability, Averages, Statistics.
10. Method in Philosophy: Intuitionism, Empiricism, Rationalism, Criticism (Kant). Dialectic or Genetic Method (Hegel). Pragmatism. The Relation of Philosophical and Scientific Method.
11. Some Problems of Modern Logic: its Relation to Mathematics; its Relation to Philosophy.
12. Relation of Logic to Epistemology.

Books for Study

1. Bosanquet: *Essentials of Logic*.
2. C. A. Mace: *The Principles of Logic*.
3. Stebbing: *A Modern Introduction to Logic*.

Metaphysics

1. Metaphysics: Meaning and Scope. Contents of Metaphysics; the Philosophy of Nature and Mind, and the Philosophy of Values.
2. Relation of Knowledge and Being. Meaning of Reality.
3. Relation of Metaphysics to Logic and Mathematics, Science and History.
4. Methods of Metaphysics (Western and Indian); Dogmatism, Empiricism, Rationalism. Scepticism, Criticism, Dialectic.
5. Epistemological Theories. The Categories of Knowledge, Realism, Idealism, Ideal-Realism.
6. Ontological Theories (Western and Indian): Pluralism, Dualism, Monism.

7. The World, the Soul, the Absolute:—

(i) Philosophy of Nature—

The World. Concepts of Time, Space, Cause, Substance, Matter, Law. Evolution in Nature: Mechanical and Teleological Evolution. Immanent Finality. The World as a System of Reals.

(ii) Philosophy of Mind—

The Soul. Relation of Mind and Body: Causal Relation. Epiphenomenalism, Interactionism, Parallelism, Instrumentalism. Life and Consciousness. The Nature of Reason. The Empirical and the Noumenal Self. The Soul and the Self.

(iii) The Philosophy of Values—

- (a) Concepts of the Good, the True, the Beautiful.
- (b) The problem of Evil.

(iv) (a) Personality, Individuality.

- (b) Theories of the Nature and the Relation of the Individual and the Universal.

(c) Transcendence and Immanence.

- (d) The Meaning and Nature of the Absolute. The Cosmos *sub specie aeternitatis*, the Universal Reason.

- (e) The Relation of Metaphysics and Religion. The Idea of God. Deism, Theism, Pantheism, Antitheistic Theories. God as conditioning the World and Soul. God and the Absolute. Relation of God to the Individual. Liberty and Necessity. Future Life and Eternity.

8. Standpoints of Current Philosophical Speculations: Humanism, Pragmatism, Philosophy of Values, Creative Evolution and Philosophy of Change, the New Realism.

Books for Study

1. Patrick: *Introduction to Philosophy*.
2. Taylor: *Elements of Metaphysics*.
3. Bertrand Russell: *Problems of Philosophy*.

Indian Philosophy

I. Vedic Period—

(i) Mantras and Brahmanas—

- (1) Early Vedic Religion. Its Polytheistic Character. Nature of Vedic Gods. Their Philosophical Basis. Emergence of Monotheistic Conceptions.
- (2) Philosophic Monotheism. Pantheistic and Monistic Tendencies.
- (3) General World-outlook characteristic of the period.

(ii) The Upanishads—

- (1) The growth and general character of Upanishadic Literature. Its importance for later Indian Thought.
- (2) *Atman* and *Brahman*, *Maya* or *Avidya* and *Prakriti*.
- (3) *Jiva*. Gross and Subtle Bodies. *Prana*. *Manas*. *Vijnana*. Waking, Dream, Sleep and *Turiya*.
- (4) Origin and Nature of Evil. Conception of *Moksha*. Qualifying Discipline. Place of Morality in the Upanishadic Scheme of Life.
- (5) Upanishadic Religion: Conception of *Isvara*. Creation and Absorption of the World. Classification of Created Things. Doctrine of *Karma*. Its Origin and Value.

II. Early Post-Vedic Period—

- (1) Hinduism: The *Mahabharata*: Different Currents of Thought. Saivism. Vaishnavism. The Metaphysics and Ethics of the *Gita*: *Karma*, *Bhakti* and *Jnana Margas*.
- (2) Early Buddhism: Its positivistic and pessimistic Character. Conception of Reality. *Sanghata* (aggregate) and *Santana* (flux). The Law of Change and its importance. Desire as the source of Evil. Mode of annihilating it. *Sila* (right conduct) and *Prajna* (right knowledge). *Nirvana*. Belief in *Karma* Doctrine.
- (3) Jainism: *Jiva* and *Ajiva*. Their Nature and mutual Relation. Atomic Theory. Conception of Being. *Syadvada*. *Jaina* Atheism. *Karma* Doctrine. Freedom. Its Means: *Thri-ratna*: Action, Contemplation and Faith.

III. The Period of the Systems—*Sutra* Literature. Ideas common to the Systems.*Pramanas*—

- (1) Charvaka: Perception, the only *Pramana*. Rejection of *Anumana*. Four *Bhutas*. Denial of *Atman*. 'Mind only a function of matter.' Hedonistic Ideal of Conduct.
- (2) Later Buddhism. Relation to Early Buddhism. The *Hinayana* Schools. *Vaibhashika*, *Sautrantika*, *Pramanas*. Truth and Error. The Doctrine of the *bahya* world. The *Mahayana* Schools: *Yogachara* and *Madhyamika* Schools. Their distinctive Doctrines of Knowledge.
- (3) Later Jainism with special reference to Theory of Knowledge.

(4) Nyaya-Vaisheshika:—

- (i) Its Realistic and Pluralistic Character. The Seven Categories. The Nine *Dravyas*. Atomic Theory. Comparison with Jaina view. Causation: *Asatkarya-vada*. *Atman* and its Specific Characteristics. God and His relation to the Universe. *Naiyayika* arguments for His existence.
- (ii) Theory of Knowledge. Truth and Error. *Pramanas*. Perception: *Nirvikalpaka* and *Savikalpaka*. View of Induction. Comparison with Buddhistic view. Inference. The Indian Syllogism and its distinguishing Features. Additional *Pramanas* according to *Nyaya*: *Sabda* and *Upamana*.
- (iii) Its pessimistic attitude towards Life. Evil. The Relation of *Atman* to Evil. Release and its Means: *Tattva-jnana*.

(5) Sankhya-yoga:—

- (i) Its Realistic and Dualistic Character. Conception of *Prakriti*. *Gunas*. Evolution. Its Order and Purpose. The *Tattvas*. Involution. Causation: *Satkarya-vada*. Conception of *Purusha*. Proofs for Plurality of *Purushas*. Atheism of *Sankhya*. Theism of *Yoga*. Proof for the existence of God according to *Patanjali*.
- (ii) Doctrine of *Vrittis*. Truth and Error. *Pramanas*. Perception. Inference. *Sabda*.
- (iii) Its pessimistic attitude towards Life. *Kaivalya* and its Means: *Yoga* and *Jnana*.

(6) Purva-Mimamsa:—

- (i) Meaning of the word *Mimamsa*. Relation between *Purva-* and *Uttara-Mimamsas*. Schools of *Purva-Mimamsa*: *Prabhakara* and *Kaumarila*.
- (ii) Its Realism and Pluralism. Comparison with *Nyaya-Vaisheshika* Categories. *Atman*. The World an Eternal Process. Denial of a Supreme God. Importance of *Karma*.
- (iii) View of Knowledge. Explanation of Error. *Pramanas*: Perception, Inference, *Sabda* and the Authority of the *Veda*, *Upamana*, *Arthapatti*, *Anupalabdhi*.
- (iv) Conception of *Dharma*. *Karma* and its main divisions. *Kamyā*, *Pratisiddha* and *Nitya*. *Moksha* and the way to secure it

(7) Vedanta :—

Systematisation of *Upanishadic Teaching*.
Its Aim.

- (i) *Advaita*.—(1) Significance of the term. Sankara and his predecessors: Gaudapada and his relation to Buddhism. Sankara's Criticism of Yogachara and Madhyamika Systems. History of *Advaita* subsequent to Sankara.

(2) Conception of Knowledge: *Vritti jnana* and *Svarupa jnana*. *Pratibhasika*, *Vyavaharika*, and *Paramarthika*. Reality Conception of *Sadasadvilakshana*. The World. Causation: Comparison with *Nyaya-Vaisesika* and *Sankhya-Yoga*. Meaning of *Vivarta*. Truth and Error. *Pramanas*. *Jiva*. *Ekajiva-vada* and *Aneka-jiva-vada*. *Saguna* and *Nirguna*. *Brahman*. *Maya* Doctrine and its History. Discipline: *Virakti* and *Upasana*. *Sadhanachatushtaya*. *Samyag-darsana* or Right Knowledge. *Sakshatkara*. *Jivanmukti*. *Videha-mukti*.

- (ii) *Visishtadvaita*.—*Pramanas*: Perception. Inference *Sabda*. Truth and Error. Distinctive feature of Ramanuja's conception of Unity. *Aprithak-siddhi*. Comparison with Sankara's view. The three *Tattvas*: *Achit*, *Chit* and *Isvara*. *Srishti* and *Pralaya* States. View of Causation. Ramanuja's Criticism of *Maya*. Plurality of Souls. Personality of God. Conception of *Moksha*. Means of securing it: *Karma*, *Jnana*, *Bhakti* and *Prapatti*.

- (iii) *Dvaita*.—Its Realism. *Pramanas*: *Pratyaksha*, *Saksipratyaksha*, *Anumana* and *Sabda*. Truth and Error. *Svatantra* and *Asvatantra* Realities. God, Soul and Nature. Their mutual Relation. *Moksha* and its Means. *Dvaita* Criticism of *Advaita*.

Books for Study

1. Hiriyanna: *Outlines of Indian Philosophy*.
2. Max Muller: *Six Systems of Indian Philosophy*.
3. Swami Prabhavananda: *Vedic Religion and Philosophy*.

Philosophy of Religion

1. Philosophy of Religion as distinguished from Philosophy, Theology, Comparative Religion and Psychology of Religion.

2. The Psychological Factors involved in Religion. Authority. Revelation.
3. The Relation of Magic and Religion. Mysticism.
4. Evolution of Religion: Animism, Polytheism, Monotheism. Tribal, National and Universal Religions.
5. The Problem of Evil.
6. Proofs of the Existence of God.
7. Meaning of the Immortality of the Soul and its value for Religion.
8. Distinction between Personal and Institutional Religion.
9. Science and Religion.
10. Value of Religion for Human Life.
11. A Brief Survey of the Leading Ideas of the Present Day Religions in India.

Books for Study

1. Galloway: *Philosophy of Religion* (Selected chapters).
2. Carpenter: *Comparative Religion*.
3. Whitehead: *Science and the Modern World* (Chapter XII).

Experimental Psychology

Part I—Experiments Suitable for Group Testing.

1. Attention—
Concentration and Distraction of Attention (Betts).
Fluctuations in Attention (Kline).
Auditory Span of Attention.
2. Errors in Observation and Report—
Testimony Value of Individuals (Whipple).
3. Mental Imagery—
Questionnaire Method (Seashore).
Whipple's Test of Ink Blots for Visual Imagination.
Lingual Invention Tests (Whipple).
4. Laws of Association—
Free Association.
Controlled Association.
5. Memory—
Economical Methods of Memorising.
Repetition *versus* Recall (Turner).
Sense *versus* Non-Sense Series.
Concentrated *versus* Distributed Learning (Turner).
6. Perception—
The Interpretative Act in All Perception (Turner).
Illusion in Visual Perception—of Length, Distance,
Angle, Curvature (Seashore).
Movement Illusion (Wheeler).

7. Reasoning—
Puzzle Situation for Analysing Inductive Reasoning.
Exercises in Deductive Reasoning—with Concrete *versus* Abstract Propositions.
Errors in Reasoning with Data involving Emotional Bias as compared to similar Data which are Objective.
Avelling's Concept Formation. Test—Pictorial Method, Word List Method.
8. Intelligence Tests—
Group Lingual Tests of Intelligence—Opposites, Analogies, Number Completion, and Reasoning.
Group Non-lingual Tests of Intelligence—Mirror Letters, Pitch.
Discrimination, Form Perception Tests and Grey's Test.
9. Emotional Expressions—
Interpretation of Facial Expressions of Emotions, with or without the Help of Names.
Interpretation of Emotional Vocal Expressions.
10. Affective Value of Simple Colours and Musical Notes.
11. Sense of Humour—
Jones Test of Sense of Humour. Ballard's Absurdities Test.
12. Ethical Discrimination—Koh's Tests.
13. Personality and Character Traits—
Test of Introversion and Extroversion.
Rating Methods of Character Analysis.

Part II—Experiments Suitable for Individual Work.

1. Attention—
Visual Span of Attention for Non-sense Letters and Meaningful Material.
Distribution of Attention between two Muscular or Mental Tasks.
2. Suggestion—
Suggestion by Progressive Weights.
The Size-Weight Illusion Test.
3. Laws of Learning—
Trial and Error *versus* Insightful Learning.
Motivation in Relation to Learning—Learning a Step-Maze, with and without Punishment for Errors.
4. Conditioned Reflexes—
Conditioning Finger Movements for Verbal Stimuli.
Effect of Interval between Primary and Secondary Stimuli.
Effect of Increasing the Intensity of Primary Stimulus.
5. Reaction Time Experiments—
Simple and Choice Reaction (Seashore).
Reaction Time for Controlled and Free Associations.

6. Perceptual Illusions—
Measurement of the Degree of Illusions under varying conditions of Background leading to an Analysis of the Factors which cause the Illusion.
7. Intelligence Tests—
Performance Tests of Intelligence.
The Form Board Tests.
The Picture Completion Test.
The Mirror Directions Test, etc.
8. Fatigue Test—
The Effect of Fatigue on Muscular Co-ordination.
The Effect of Fatigue on Speed of Mental Association.
The Effect of Fatigue on Sensory Discrimination.
9. Emotional Reactions—
Measurement of Psycho-galvanic Reflex for Simple Sensory Stimuli. Verbal Response for Free Association Test.

Books for Study

1. Seashore: *Elementary Experiments in Psychology*.
2. Collins and Drever: *Experimental Psychology*.
3. Foster and Tinker: *Experiments in Psychology*.

(16) *Sociology*

- (1) Principles of Sociology—General principles.
- (2) Principles of Sociology—Social Psychology. Indian Social Institutions.
- (3) Anthropology.

The following is the detailed course of study in the several subjects in Sociology:

Principles of Sociology

1. Nature and Scope of Sociology. Definition. Divisions.
2. The Relation of Sociology to Biology. History, Psychology, Anthropology, Ethnology, Economics, Ethics, Politics.
3. The Theory of Evolution in Relation to Man.
4. The Growth of Society—
Zoogenic, Ethnogenic and Demogenic Associations. A Brief Survey of Civilizations.
5. Factors in the Growth of Social Organisations—
(a) Physical: Geographic (climate and natural resources as determining fundamental occupations).
(b) Biological: Nutrition and Reproduction. Heredity and environment.
(c) Psychological.
(d) Aesthetic.
(e) Ethical.

- (f) Religious.
- (g) Historical.
- 6. Types of Social Organization—
 - (a) Family : Matriarchal and Patriarchal.
 - (b) Horde, Clan, Tribe, Caste, Race, Nation.
 - (c) Political : City State, Country State, Empire, Federation, Nationalism.
 - (d) Economic : Communism, Slavery, Feudalism, Industrialism, Soviet Communism.
 - (e) Religious : Church, Monastic Orders, Mutts.
 - (f) Social : Clubs, Associations.
 - (g) Educational : School, College, University.
- 7. Social Pathology—
 - (a) Poverty and the Problem of Charity.
 - (b) Diseases and Sanitation, Sterility and Sterilisation.
 - (c) Crime and Prisons.
 - (d) Over-population and Birth-control.
 - (e) Abuse of Nationalism and Wars.
 - (f) Colour or Racial Problem.
- 8. Social Laws and Social Justice.
- 9. Present Day Sociological Problems—
 - (a) Relation of Races.
 - (b) Recent Economic Development : Industrial Organization, Credit System, Labour Movement and Socialistic Theories.
 - (c) Recent Political Developments : Growth of Japan. Renaissance of Mahomedan Countries. British Empire as a Federation. Growth of Nationalism in non-European Countries. The League of Nations.
 - (d) Recent Tendencies in Morality and Religion. Feminism.
 - (e) Present Day Tendencies in World Religions.

A. Indian Social Institutions

- I. General Characteristics of Hindu Social Organization—
 - (1) Caste : Its Different Aspects—Economic, Racial, Ethical, Religious, Social.
 - (2) The Different Theories of Caste.
 - (3) A Critical Survey of the Effects of Caste on the History of India.
 - (4) The Distinction between Caste and Class. The Influence of Caste on non-Hindus in India.
 - (5) The Influence of British Administration and British Law on Caste.
- II. Hindu Joint Family—
 - (1) Its Original Advantages.
 - (2) Distinction between Family, Joint Family and Coparcenary.

- (3) The Legal Implications of Joint Family.
- (4) The Right to Partition.
- (5) The Position of Women under the Hindu Law of Joint Family.
- (6) Its Value under Present Conditions.
- III. Hindu Marriage—
 - (1) Different Kinds of Marriage.
 - (2) Anuloma and Pratiloma Marriage. The General Question of Inter-caste Marriage and its History. The Significance of Gotra and Pravara.
 - (3) The Legal and Social Implications of Stridhanam.
 - (4) Infant Marriage: Its History, its Advantages, its Evil Effects. Critical Study of the Sarda Act.
 - (5) Prohibition of Widow Re-marriage. Its Legal and Social effects.
 - (6) The Question of Divorce.
 - (7) Marriage Customs. Devadasis. Polygamy. Marriage Customs among the Numbudris and Nairs.
- IV. Mahomedan Family—
 - (1) Marriage as Contract. Mehr. Divorce.
 - (2) The General Legal Status of Woman in Islam.
 - (3) The Purdah. The Original Significance of the Purdah in the *Quran*. Its Vogue in India and Other Islamic Countries. Its Disadvantages.
- V. Indian Village Organization—
 - (1) The Importance of Village in Indian Society.
 - (2) The Ancient Indian Village. Its Organization (*cf.* Majumdar's *Corporate Life in Ancient India*).
 - (3) The Village Sabha. Its Relation to the Central Government.
 - (4) The Effect of British Administration on Village Organization.
 - (5) The Present state of Villages in India. Their Economic Life.
 - (6) Revival of Village Panchayets: how far successful.
 - (7) Village Problems at the Present Day.
- VI. The Relation of Hindu Social Institutions and Hindu Religion. The General Question of Introducing Reform by Legislation.

B. Social Psychology

1. Definition, Scope and Importance of Social Psychology. Relation of Social Psychology to other Social Sciences.
2. Instincts: Their Nature and their Sociological Importance.
3. The Role of the Concepts of Suggestion, Imitation, Sympathy and Intellect in the Understanding of Social Life.

4. The Psychology of Moral Life, of Economic Life and of Religious Life.
5. Definition of the term 'Crowd'. Causes of the Formation of Crowds. The Intellectual and Emotional Characteristics of Crowd Behaviour. The 'Crowd' distinguished from the 'Organized Group'.

Books for Study

Sociology

1. Blackmar and Gillin: *Outlines of Sociology*.
2. Giddings: *Principles of Sociology*.
3. Ellwood: *Social Psychology*.
4. Mukerjee and Sen Gupta: *Social Psychology*.
5. Viswanathan: *Racial Synthesis in Hindu Culture* (Sections on Caste).
6. Ghurye: *Race and Caste in India*.
7. *Women's Rights under the Hindu Law*. (Report of the Committee appointed by His Highness the Maharaja of Mysore, Chapter III.)
8. Appaswamy: *Legal Aspects of Social Reform*.
9. O'Malley: *India's Social Heritage*.

Anthropology

Introductory Topics: Scope. Relation to other sciences.

Physical Anthropology: Anthropometry. Human anatomy. Instruments and methods. Indices and criteria of racial classification.

The races of mankind: Evolution in general. The extinct races. The living races and their subdivisions. Characteristics of the races. Racial history.

The Races of India: The older views. Criticism. Re-classification. Racial history of India.

Cultural Anthropology: History of culture. Paleolithic stages. Neolithic cultures. The metal ages. Cultural stages in India.

Special topics: Evolution of culture and diffusion. Useful arts of primitive men. Early history of Fine Art. Language. Writing. Magic and religion. Primitive life in India.

Social Anthropology: Ethnology. Evolution and primitive society. Marriage. Family. Sib. Associations. Property. Justice. Rank. Government Primitive Society in India.

Ethnography: Methods of study. Select foreign tribes; Australians. Select Indian Tribe: Todas.

Books for Study

Kroeber: *Anthropology*.

British Association: *Notes and Queries in Anthropology. Imperial Gazetteer of India*. Vol. I, Chapter VI.

Lowie: *Primitive Society*.

Ghurye: *Caste and Race in India*.

Books for Reference

Haddon: *Races of Man*.

Keane: *Man—Past and Present*.

Roy: *Physical Anthropology*.

Hutchinson: *Living Races of Mankind*.

Osborn: *Men of the Old Stone Age*.

De Morgan: *Pre-historic Man*.

Sollas: *Ancient Hunters*, Chapter VII.

Thurston: *Castes and Tribes of Southern India—Todas*.

Taylor: *Anthropology*.

(17) *Education*

The course of study shall comprise—

1. Philosophy of Education.
2. History of Educational Ideals.
3. Educational Psychology.

(18) *Mathematics**

1. Pure Mathematics—Analysis, Geometry (Pure and Analytical).
2. Applied Mathematics—*Either* Dynamics, Statics and Astronomy.

Or

General Statistics and applications of Mathematics to Economics and Mental and Social Measurements.

The following is the detailed course of study in Mathematics:—

*Pure Mathematics**Analysis—*

Ideas of rational, irrational and complex numbers. Sequences. Limits. Addition, subtraction, multiplication and division theorems on limits of sequence. Monotonic sequences, Cauchy's principle of convergence (without proof). A monotonic sequence tends to a limit (examples and applications of the result only).

Simple comparison tests for convergence and divergence of series. D'Alembert's and Raabe's Tests (in their simpler forms).

* The syllabus and the examination scheme for the B.A. and the B.Sc. in all Science subjects shall be the same.

Absolute convergence. Convergence of alternating series. Multiplication theorem for absolutely convergent series. The Binomial Theorem for rational index. Multinomial Theorem. Exponential and logarithmic series [rigorous proof for the series for $\log(1+x)$ is not expected]. Recurring series. Addition and multiplication theorems on determinants. Solution of simultaneous linear equations.

The fundamental relations between the roots of a polynomial equation and its coefficients. Simple transformation of roots. Reciprocal equations. Simple properties of the roots $f(x)=0$ and $f'(x)=0$, and their mutual relations.

Functions of a single variable. Definition of continuity. Graphical study of properties of continuous functions. Differential coefficients. Differentials. Differentiation of various functions. Successive differentiation. Leibnitz's theorem. First and second mean value theorem of the differential calculus. Cauchy's mean value theorem. L'Hospital's Rule. Taylor's theorem. Simple examples of expansions by Taylor's theorem and by the formation of linear differential equations.

Subtangent. Subnormal. Curvature of plane curves. Cartesian, polar and (p.r.) formulæ. Circle of curvature. Involution and evolutes. Double points of plane curves. Maxima and minima for function of one variable. Points of inflexion. Simple examples on partial differentiation.

Integration. Methods of integration. Reduction formulæ. The definite integral as limit of a sum (introduced geometrically). Lengths and areas of plane curves. Volumes and surfaces of revolution. Theorems of Pappus.

The Argand diagram. Addition and multiplication of complex numbers. De Moivre's Theorem for a rational index. Series for $\cos \theta$ and $\sin \theta$ in powers of θ (rigorous proof not expected). Expansion of $\tan(A+B+C+\dots)$ in terms of $\tan A$, $\tan B$, etc. Expressions for $\cos n\theta$ and $\sin n\theta$ in terms of cosines and sines of multiples of θ . Definitions of circular functions for a complex variable. Hyperbolic functions. Principal values of the inverse circular and hyperbolic functions. Logarithm of a complex number. Simple examples of separation of real and imaginary parts. Gregory's series, Simple series for π .

Geometry—

(i) Pure Geometry.

Properties of circles. Pole and polar. Coaxial circles. Inversion. Elementary notions about projection, cross-ratios and harmonic division. Harmonic property of pole and polar of circle. The quadrilateral and quadrangle. Their harmonic properties. The property of collinearity of the middle points of the diagonals of a quadrilateral.

(ii) Plane Analytical Geometry.

Straight lines. The circle. Coaxial circles. The conic sections referred to their principal axes. Tangent, pole and polar chord with given middle point, pair of tangents from a point. Centre, asymptotes and axes of a conic given by the general cartesian equation of the second degree. Tracing of conic sections. Polar equations of the straight line, circle and conic.

(iii) Solid Geometry.

Direction cosines, angle between two straight lines. The equation of the plane. Distance of a point from a plane. Equations of a straight line. Distance of a point from a straight line. Condition for coplanarity of two lines. Shortest distance between two lines in space.

Applied Mathematics

Dynamics, Statics and Astronomy—

1. *Dynamics*.—Addition of vectors. Angular velocity and acceleration. Areal velocity and acceleration. Relative velocity. Newton's laws of motion. Work and energy. Conservation of energy and momentum. Units and dimensions. Motion in a straight line under constant acceleration. Projectiles under gravity. Collision of elastic bodies. Simple harmonic motion. Combination of S. H. M.'s tangential and normal acceleration. The simple and conical pendulums. Motion in a vertical circle.

2. *Statics*.—Moments and couples. Conditions of equilibrium of a rigid body under coplanar forces. Laws of friction. Problems on centre of gravity, using methods of the calculus. Stable and unstable equilibrium. The simple catenary.

3. *Astronomy*.—The celestial sphere. Celestial co-ordinates. The Earth and its rotation. Foucault's pendulum.

The transit instrument. The equatorial. The sextant. The ecliptic. Apparent path of the Sun at different latitudes. Length of day. Season twilight.

Sidereal time. Apparent and mean time. Conversion of time. Equation of time (rough graphical study only). Date line. The calendar. Determination of geographical longitude.

Planets: Kepler's laws. Phases of planets. Direct and retrograde motion. Sidereal and synodic periods. Comets and meteors. The Moon. Phases and period. The Harvest Moon. Eclipses of the Sun and the Moon.

Atmospheric refraction: Geocentric parallax. Annual parallax. Distances of Sun, Moon and Stars from the Earth. Precession, nutation and aberration. Stars and their classification. Variable and binary stars. Apparent and absolute magnitudes, clusters and nebulae. Proper motions of stars.

General Statistics and applications of Mathematics to Economics and Mental and Social Measurements—

1. Collection and classification of statistics.
2. Graphical representation of numerical data.
3. Calculation of central tendencies and of measures of scatter.
4. Linear and parabolic curve fitting. Method of least squares.
5. Measurement of relationship between two variables. Product-moment method of determining correlation coefficient.
6. Elementary problems of sampling. (Advanced properties of the normal probability curve will not be required.)
7. Expressions for utility and marginal utility. Bernoullian hypothesis. Subjective price and consumer's surplus.
8. Curves of demand and supply. Alterations in price and output for given changes in condition of supply and demand. Numerical measures of elasticity.
9. Efficiency of money. Increasing, constant and decreasing returns. Curves of integral and marginal supply. Effects of a small tax or bounty on production.
10. Conditions of monopolistic production. Compromise benefit and consumers' combinations.
11. Essentials of mental measurement. Weber's and Fechner's laws.
12. Constants of mental measurement. Their reliability measures.

Books for Study

(Relevant portions of the following books)

1. Milne: *Higher Algebra*.
2. Osgood: *First Course in Differential and Integral Calculus* (Macmillan & Co., New York).
3. Siddons and Hughes: *Trigonometry*, Parts III–IV (Cambridge University Press).
4. Askwith: *Pure Geometry*.
5. Loney: *The Elements of Co-ordinate Geometry*, Part I.
6. Bell: *Co-ordinate Geometry of Three Dimensions*.
7. Norris and Legge: *Mechanics via the Calculus*.
8. H. Subramania Iyer: *A Text-book of Astronomy* (Chitra Publishing House, Trivandrum).
9. Caradog Jones: *A First Course in Statistics*.
10. A. T. Bowley: *Groundwork of Mathematical Economics*.
11. Thompson: *Essentials of Mental Measurements*.
12. G. W. Caunt: *Elementary Calculus* (Oxford University Press).

Book for Reference

13. Child and Barnard: *Higher Algebra* (Macmillan & Co.).

(19) *Physics*

The subjects of the Intermediate course, and in addition, the following (the treatment to be both experimental and mathematical; employing simple differential and integral calculus):—

Dynamics.—Dynamical units. Dimensions. Resolution and composition of vector quantities. Graphical methods applied to vectors. Uniplanar motion of a particle under constant acceleration. Simple harmonic motion. Angular motion. Moment of inertia. The compound pendulum. Work, energy, power. Impact. Equilibrium of bodies acted on by coplanar forces. Centre of mass and its determination by calculation and experiment. Simple machines. Friction.

Hydrostatics.—Fluid thrust on immersed surfaces. Centre of pressure. Conditions of stability of floating bodies. Hydrostatic appliances: pumps, gauges, presses. Capillarity: surface tension.

General Physics.—Elasticity: Elastic limit. Hooke's Law. Compressibilities of gases, liquids, and solids. Rigidity. Effects of simple longitudinal stress. Young's Modulus and its connection with compressibility and rigidity. Bending of bars of simple section in one plane. Torsion. General properties of gases. Explanation of pressure exerted by a gas according to the kinetic theory. Avogadro's Law. Diffusion of gases and liquids. Osmosis: Osmotic Pressure.

Heat.—Thermometry. Calorimetry. Methods of determination of thermal constants. Relations of volume, pressure and temperature of gases, vapour and liquids. Continuity of state. Equation of Van der Waals. Critical state and critical constants. Elements of the kinetic theory of gases. Conduction of heat; determination of thermal conductivity. Diffusion of heat. Radiation and absorption. Laws of cooling. Stefan-Boltzmann Law. Distribution of energy in spectrum. Radio-meters. Elements of thermo-dynamics. Isothermal and adiabatic changes in gases. Specific heat at constant volume and at constant pressure. Reversible thermal processes. Carnot's cycle. Efficiency of thermal engines. Entropy. Absolute thermo-dynamics scale of temperature. Joule-Thomson porous plug experiment. Hampson air liquifier.

Light.—Velocity of light and its determination. Photometry. Reflection and refraction. Geometrical study of action of mirrors and thin lenses. Dispersing effects in cases of prisms and thin lenses. Direct vision spectroscopy. Achromatic lens combinations. Wave theory of light. Interference. Huyghen's principle: explanation of reflection and refraction. Rectilinear propagation of light explained on the wave theory. Diffraction. Wavelength of light and its determination. Diffraction grating. Resolving power of grating. Spectrum analysis. Doppler's principle and

its applications. Double refraction. Polarisation plane, circular and elliptical. Effects produced by thin crystalline plates on parallel pencils between polariser and analyser. Determination of principal directions in crystalline plates. Nicol's prism. Norrenberg's polariscope. Wave surface in uniaxial crystal. Rotation of plane of polarisation. Half-wave and quarter-wave plates. Laurent's polarimeter.

Sound.—Propagation of sound in material media. Velocity of sound and its measurement. Musical sound: quality, pitch, intensity. Reflection, refraction and diffraction of sound: the common results of these. Sound as wave motion. Wavelength. Stationary waves. Resonance. Kundt's dust-tube experiment and its application. Melde's experiment. Interference.

Magnetism and Electricity.—Mutual action between magnet poles. Definition of unit pole. Action of magnetic field on pole. Magnetic intensity and its measurement. Magnetic potential. Energy of magnetic shell in magnetic field. Total normal induction. Gauss' Theorem. Magnetic induction. Simple magnetic properties of iron and steel. Permeability, susceptibility, hysteresis. Elements of terrestrial magnetism. Mutual action between electric charges. Electric intensity and its measurement. Electric potential. Dielectric coefficient. Electric induction. Capacity and its calculation in simple cases. Energy of charged conductors. Distribution of charge over surface of conductor. Electric images. Case of point charge and plane conductor. Electric currents and their effects. Magnetic field of current. Action of magnetic field on current. Galvanometers. Definition of unit current. Electromotive force. Resistance. Ohm's Law. Measurement of resistance. Wheatstone's Bridge. Conduction in electrolytes. Laws of electrolysis. Chemical actions in primary cells. Secondary or accumulator cells. Electromagnetic induction. Self and mutual inductance. Energy of electric current. Lenz's Law. Simple forms of direct current generator and motor. Alternating currents and simple form of alternating current generator. Applications of electric currents to transmission of power. Electrical communication. Thermo-electricity. Seebeck, Peltier and Thomson phenomena. Thermo-electric diagram. Oscillating discharge of condenser. Simple facts relating to the generation and propagation of electric waves.

(20) Chemistry

The matter included in the syllabus for the Intermediate course, and in addition the following:—

Inorganic Chemistry.—A study in detail of the elements and their compounds from the standpoint of the periodic classification, rare elements being omitted.

Theoretical and Physical Chemistry.—Methods of determining equivalent, atomic and molecular weight. The atomic theory

Valency. The properties of gases. Transition from gaseous to liquid state. Vapour pressure and boiling point. Solution. Osmotic pressure. Theory of electrolytic dissociation. Electromotive force in cells. Relation of chemical energy to electrical energy and heat. Electrolysis. Measurement of hydrogen in concentration. Colloidal solution. The Law of Mass Action. Speed of chemical change. Catalysis. Thermo-chemistry. Relation of physical properties to chemical constitution.

Organic Chemistry.—Elementary Organic Analysis—Methane, Ethane, Ethylene, Acetylene—Methyl iodide, Ethyl bromide, Chloroform, Iodoform—Cyclohexane, Benzene, Toluene, Naphthalene, Anthracene—Bromobenzene, Nitrobenzene, m-Dinitrobenzene, Benzenesulphonic acid—Methyl alcohol, Ethyl alcohol, Glycerol, Phenol, Benzyl alcohol, Resorcinol—Ethyl Ether—Dimethyl sulphate, Ethyl acetate—Formaldehyde, Acetaldehyde, Chloral, Benzaldehyde, Acetone, Acetophenone, Quinone, Anthraquinone, Alizarin—Acids: Formic, Acetic, Stearic, Oleic, Benzoic, Cinnamic, Lactic, Salicylic, Gallic, Acetoacetic, Oxalic, Malonic, Succinic, Maleic, Fumaric, Phthalic, Malic, Tartaric, Citric—Glucose, Fructose, Sucrose, Lactose, Starch, Cellulose—Acetonitrile, Benzonitrile—Methylamine, Aniline, Benzene diazonium chloride—Glycine—Phenylhydrazine—Acetanide, Acetanilide, Benzamide, Urea (Carbamide)—Magnesium methyl iodide (Grignard's reagent).

The subject (including the theoretical aspects of the above substances) is to be treated in an elementary manner. Details of preparation are not expected.

Laboratory Courses

Qualitative analysis including analysis of mixtures of mineral substances.

Volumetric analysis: the estimation of alkalis, alkali carbonates and acids by neutralisation. Determinations involving the use of the permanganate, dichromate, iodine and thiosulphate processes. Estimation of chlorides.

Gravimetric determination of iron, aluminium, silica and sulphuric acid.

Detection of elements. Reactions of aliphatic hydrocarbons, alcohols, phenols, aldehydes, ketones, acids, esters, sugars, amines and amides. Estimation of benzoic acid, phenol, glucose and urea. Simple preparations such as nitrobenzene, m-dinitrobenzene, aniline, ethyl acetate and acetamide.

Note.—In treating the above syllabus, due attention is to be paid to the historical aspect of the subject.

Books for Study

Sherwood Taylor: *Inorganic and Theoretical Chemistry*.
Caven and Lander: *Systematic Inorganic Chemistry*.

Lowry and Sugden: *A Class Book of Physical Chemistry*.
 Perkin and Kipping: *Organic Chemistry*.
 Moureu: *Fundamental Principles of Organic Chemistry*.
 Read: *A Text-Book of Organic Chemistry*.
 Holleman: *Laboratory Manual of Organic Chemistry*.
 Fenton: *Notes on Qualitative Analysis*.
 Caven: *Quantitative Chemical Analysis*, Volumes I and II.
 Newbury: *A Concise Organic Chemistry* (Oxford University Press, Madras).

(21) Zoology

A study of the main types illustrative of habits, structure and life-history including a knowledge of classification, affinities and palæontological history of the following groups:

- (1) Protozoa, Sponges, Cœlentera, Platyhelminia, Nemotoda ;
- (2) Rotifera, Annelida, Polyzoa, Brachiopoda, Sipunculoidea ;
- (3) Echinoderma, Arthropoda, Mollusca and Chordata.

A general knowledge of the principal theories of organic evolution, heredity and geographical distribution of animals.

Note.—Students are required to make collections of animals during excursions and holidays and maintain notes of such collections.

Practical Work

The practical work will include dissection of all the types including marine organisms (while on excursion), examination of skeletal material, description and identification of specimens and preparations, and ability to prepare microscopical slides.

(22) Botany

1. The main points of structure, life-history, development and taxonomic relationship of the following groups in general and the genera in particular:

Myxomycetes.—Bacteria—Cyanophyceæ. Oscilloria Nostoc, Rivularia and Scytonema—Diatomaceæ.—Chlorophyceæ, Chlamydomonas, Pandorina, Eudorina, Volvox, Ulothrix, Oedogonium, Ulva, Enteromorpha, Coleochaete, Protoceus, Scendesmus, Hydrodictyon. Cadophora, Vaucheria, Caulerpa, Botrydium, Spirogyra, Zygnema and Desmids.—Characeæ, Chara or Nitella.—Phaeophyceæ, Ectocarpus, Fucus, Sargassum—Rhodophyceæ, Liagora, Batrachospermum, Polysiphonia.—Gracilaria, Amphiroa—Fungi: Xycomycetes, Pythium, Phytophthora, Mucor or Rhizopus, Pilobolus, Saprolegnia, Gystopus.—Ascomycetes Saccha-romyces Eurotium, Pencillium Erysiphe, Peziza, Xylaria.—Besidiomycetes, Ustilago, Puccinia, Poliporus, Agaricus. Lycoperdon, Phallus.—Lichens.—Bryophytes, Riccia, Merchantia—Anthoceros—Funaria, or Polytrichum.—Pteridophytes, Lycopodium, Selaginella, Isoetes.—Equisetum, Ophioglossum, Gleichenia, Osmunda, Angiopteris,

Trichomanes Pleopeltis, Adiantum, Marsillia, Gymnosperms, Cycas, Pinus.

2. The morphology and development of the reproductive organs of angiosperms.

3. The external morphology of angiosperms and the general principles of classification and the distinguishing characters of the following families as used in the flora of British India:—

Magnoliaceæ, Anonaceæ, Mymphæaceæ, Cruciferae, Capriferae, Malvaceæ, Sterculiaceæ, Tiliaceæ, Geraniaceæ, Rutaceæ, Meliaceæ, Rhamnæ, Sapindaceæ, Anacardiaceæ, Leguminosæ, Rosaceæ, Combretaceæ, Myrtaceæ, Lytharaceæ, Cucurbitaceæ, Umbelliferae, Rubiaceæ, Compositæ, Sapotaceæ, Oleaceæ, Apocynaceæ, Asclepiadaceæ, Boraginæ, Convolvulaceæ, Solanaceæ, Scrophularinæ, Acanthaceæ, Verbinaceæ, Labiateæ, Amaranthaceæ, Loranthaceæ, Euphorbiaceæ, Urticaceæ, Hydrocharideæ, Orchideæ, Scitamineæ, Amaryllideæ, Liliaceæ, Commelinaceæ, Palmae, Aroideæ, Cyperaceæ, Gramineæ.

4. *Physiology*.—The chemical composition of the plant. Materials of the plant food and their sources. The nature of the soil and importance of its constituents and micro-organisms. Movements of water and gases. Assimilation of carbon and nitrogen. Transpiration and translocation of the assimilated products. Parasitism and other modes of nutrition. Metabolism. Respiration. The influence of light, heat and gravity. Growth, movements and irritability in plants. Sexual reproduction and its significance. Vegetative reproduction, the phenomenon of cross-fertilisation. Variation, heredity and mendelism theories of evolution and origin of species.

5. *Histology*.—The structure and mode of division of the cell. The nature of cell-contents. The nature and mode of origin of plastids, cell-sap and other cell-contents. The physical and chemical properties of protoplasm and cell-wall. The origin, nature and development of plant tissues. Primary and secondary tissues and their distribution in the plant body.

6. *Ecology*.—Structural adaptation to environment. Plant communities.

Practical Work

Candidates are expected to be able to make preparations illustrating the form and structure of any plant of the groups mentioned in the syllabus and describe it with sketches sufficient for its identification; to make dissections with the simple microscope of the floral parts of angiosperms; to make drawings; to construct floral diagrams and refer them to their families; to describe in technical language plants belonging to any of the groups in the syllabus.

At the practical examination, each candidate must submit his laboratory note-books, a collection of named plants collected

and preserved by himself and a record of field work showing a good acquaintance with the flora of the Mysore State.

Simple experiments in plant physiology.

SCHEME OF EXAMINATION

[Vide Ordinance 218 (b)]

I. COMPULSORY ENGLISH

			Max. Marks
1. English Composition I	..	3 hours	100
2. English Composition II	..	„	100
TOTAL ..			200

II. SECOND LANGUAGE†

Composition and Translation*	} ∴ 3 hours	100
Or		
Translation in respect of Classical Languages. ∴ ∴		
TOTAL ∴		100

III. OPTIONAL SUBJECTS

(1) English

1. Drama	..	..	..	3 hours	150
2. Poetry	..	..	..	„	150
3. Prose	..	..	..	„	150
TOTAL ..					450

	Max. Marks
* Composition	75
Translation from English to the Second Language ..	25
TOTAL ..	100

† The following is the scheme of examination in French and Latin:—

French

Prescribed Texts, Grammar and Translation from English into French and from French into English ..	3 hours	100
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Note.—Passages for translation from French into English shall be chosen from the prescribed texts.

Latin

Prescribed Texts, Grammar and Translation from English into Latin ..	3 hours	100
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					Max. Marks
(2) <i>Kannada</i>					
1.	Poetry	3	hours	150	
2.	Prose and Drama	150	
3.	History of Language and History of Literature	150	
TOTAL ..				450	
(3) <i>Telugu</i>					
1.	Text-books and Grammar ..	3	hours	150	
2.	History of Language and Literature ..	..	..	150	
3.	Composition and Translation ..	..	..	150	
TOTAL ..				450	
(4) <i>Tamil</i>					
1.	Text-books and Grammar ..	3	hours	150	
2.	History of Language and Literature ..	..	..	150	
3.	Translation .. .. .	..	..	150	
TOTAL ..				450	
(5) <i>Urdu</i>					
1.	Prose and Poetry	3	hours	150	
2.	Grammar, Rhetoric, Prosody and History of Literature .. .. .	..	..	150	
3.	Translation .. .. .	..	..	150	
TOTAL ..				450	
(6) <i>Sanskrit</i>					
(i) Sahitya—Classical Literature and Criticism					
1.	Classical Prose and Poetry ..	3	hours	150	
2.	Drama and Poetics .. .. .	..	..	150	
3.	Grammar and History of Literature ..	..	..	150	
TOTAL ..				450	
(ii) Vedic Studies					
1.	Vedic Texts I	3	hours	150	
2.	Vedic Texts II .. .. .	..	..	150	
3.	Vedic Grammar and History of Vedic Literature .. .. .	..	..	150	
TOTAL ..				450	

(iii) Darsanas—Philosophical Literature			Max. Marks
1. Prescribed Texts I Paper	.. 3 hours		150
2. Prescribed Texts II Paper	.. „		150
3. Outlines of Indian Philosophy	.. „		150
TOTAL ..			450

(7) *Persian*

1. Prose and Poetry	..	3 hours	150
2. History of Literature and Language	..	„	150
3. Translation	..	„	150
TOTAL			450

(8) *Arabic*

1. Prose and Poetry	..	..	3 hours	150
2. History of Literature and Language			„	150
3. Translation	..	..	..	150
TOTAL ..				450

(9) *Avestan and Pahlavi*

1. Prose and Poetry	..	..	3 hours	150
2. History of Literature and Language			„	150
3. Translation	..	..	„	150
TOTAL ..				450

(10) *Hindi*

1. Poetry .. ..	..	3 hours	150
2. Prose and Drama ..	..	„	150
3. History of Hindi Language and Literature, and Translation ..	..	„	150
TOTAL ..			450

Note.— In the third paper 50 per cent. of the maximum marks shall be allotted for translation.

(11) *History*

1. History of India, Political and Cultural, to 1300 A.D. 3 hours	150
2. History of India, Political and Cultural, after 1300 A.D.	.. .. „	150
3. History of Europe from 1500 A.D.	.. .. „	150
TOTAL ..		450

				Max. Marks
(12) <i>Geography</i>				
1.	Human and Political Geography	..	3 hours	150
2.	Economic Geography	..	..	150
3.	A Special Subject	..	..	150
TOTAL				450
(13) <i>Economics</i>				
1.	General Economics I	..	3 hours	150
2.	General Economics II	..	..	150
3.	Elements of Statistics			
<i>Or</i>				
	Recent Economic History of India		..	150
TOTAL				450
(14) <i>Politics</i>				
1.	Comparative Politics	..	3 hours	150
2.	Political Theory	..	..	150
3.	Public Administration	..	..	150
TOTAL				450
(15) <i>Philosophy</i>				
(a)	(1) Psychology (General)	..	3 hours	150
	(2) Ethics	..	..	150
	(3) Plato's Republic	..	..	150
TOTAL				450
(b)	(1) Psychology (General)	..	3 hours	150
	(2) and (3) Any two of the following:—			
	Logic, Metaphysics, Indian		3 hours	
	Philosophy, Philosophy of		each carrying	300
	Religion		150 marks	
TOTAL				450
(c)	(1) Psychology (General)	..	3 hours	150
	(2) Experimental Psychology (Theory)		..	150
	(3) Experimental Psychology (Practical)	..	..	150
TOTAL				450

				Max. Marks
(16) <i>Sociology</i>				
1.	Principles of Sociology I	..	3 hours	150
2.	Principles of Sociology II	..	"	150
3.	Anthropology .. ..	..	"	150
TOTAL ..				450
(17) <i>Education</i>				
1.	Philosophy of Education ..	..	3 hours	150
2.	History of Educational Ideals	..	"	150
3.	Educational Psychology ..	..	"	150
TOTAL ..				450
(18) <i>Mathematics</i>				
1.	Pure Mathematics I .. ..	..	3 hours	125
2.	Pure Mathematics II .. ..	..	"	125
3.	Applied Mathematics—Either Dynamics, Statics and Astronomy	}	"	150
	Or General Statistics and Applications of Mathematics to Economics and Mental and Social Measurements			
4.	Class Records .. ..	..		50
5.	Class Examinations .. ..	..		50
TOTAL ..				500
(19) <i>Physics</i>				
1.	Physics I .. ..	..	3 hours	150
2.	Physics II .. ..	..	"	150
3.	Practical Physics .. ..	..	"	100
4.	Class Records .. ..	..		50
5.	Class Examinations .. ..	..		50
TOTAL ..				500
(20) <i>Chemistry</i>				
1.	Chemistry I .. ..	..	3 hours	150
2.	Chemistry II .. ..	..	"	150
3.	Practical Chemistry .. ..	..	"	100
4.	Class Records .. ..	..		50
5.	Class Examinations .. ..	..		50
TOTAL ..				500

(21) <i>Zoology</i>					Max. Marks
1.	Zoology I	..	..	3 hours	150
2.	Zoology II	..	..	..	150
3.	Practical Zoology	..	..	..	100
4.	Class Records	..	..	..	50
5.	Class Examinations	..	..	..	50
TOTAL ..					500

(22) <i>Botany</i>					
1.	Botany I	..	..	3 hours	150
2.	Botany II	..	..	..	150
3.	Practical Botany	..	..	..	100
4.	Class Records	..	..	..	50
5.	Class Examinations	..	..	..	50
TOTAL ..					500

Note.—In the case of all examinations in Optional Arts subjects, a statement of class examination marks in the subjects concerned shall be furnished to the Chairman of the Board of Examiners and by him to the University, these marks being used solely for the decision of cases on the border line between passing and failing or between two classes.

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide* Ordinances 74 to 76]

B.A. (Hons.) Degree Examination

CONDITIONS OF ADMISSION*

[*Vide* Ordinance 10]

COURSES OF STUDY (GENERAL)

[*Vide* Ordinances 77 to 79]

COURSES OF STUDY (DETAILED)

[*Vide* Ordinance 217 (b)]

I. COMPULSORY ENGLISH

Composition on the non-detailed study of prescribed text-books.

* No one is allowed to enter for the B.A. (Hons.) Degree Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

II. SECOND LANGUAGE

(1) *Kannada*

Text-books in Modern Kannada to be prescribed.

(2) *Telugu*

The books to be set for non-detailed study shall consist of—

1. One selection from the *Mahabharatamu* or other early classic.

2. One selection from the mediæval poets.

3. One modern prose work.

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(3) *Tamil*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(4) *Urdu*

Composition.

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(5) *Sanskrit*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(6) *Persian*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(7) *Arabic*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(8) *French*

Same as for the B.A. Degree Examination.

(9) *Latin*

Same as for the B.A. Degree Examination.

III. OPTIONAL SUBJECTS

(1) *English*

Major Subject—

1. Chaucer and History of English Language.
2. History of English Literature.
3. Elizabethan Drama.
4. Elizabethan Prose and Poetry.
5. Post-Elizabethan Literature.
6. Comparative Drama.

Minor Subject—

1. Rhetoric and Principles of Criticism.
2. Outlines of English History.

3. One of the following (with prescribed text-books):—

- (i) Kannada Literature.
- (ii) Urdu do.
- (iii) Sanskrit do.
- (iv) Persian do.
- (v) Politics comprising—
 - (a) English Political Thought in a prescribed period.
 - (b) Select text-books with reference to the above period.

The following is the detailed syllabus in Language for English Honours—

1. The Indo-European family of Languages—the discovery of Sanskrit—Grimm's Law—Verner's Law.
2. Languages in England before English—the Romans in Britain, Latin in Britain, the Teutonic conquest, origin and position of English, periods in Old English, Dialects, Characteristics of Old English, Old English Literature.
3. Foreign influence on Old English vocabulary—Celtic, Latin, Scandinavian.
4. The Norman Conquest and its linguistic consequences.
5. Re-establishment of English (1200–1500): Loss of Normandy, Hundred Years War, Rise of the middle class.
6. Middle English: Decay of inflexions, French influence, Middle English Dialects, London English, Rise of the "standard language".
7. The Renaissance: the vernacular problem, struggle for recognition, 'Inkhorn terms', changes in vocabulary and meanings, reinforcements from Latin and French.
8. Shakespeare and the Bible.
9. The Eighteenth Century: Refinement of the language, "fixing" the language, an English Academy? Johnson's Dictionary, the eighteenth century grammarians, reform of vocabulary, objections to 'borrowings', growth of the British Empire and its influence on language.
10. 1800 and after: The advent of scientific terms, new coinages, the German influence, Carlyle, experiments in 'rationalising' the spelling, Robert Bridges and others.
11. The new branch of language-study: Semantics.

(2) Kannada

Major Subject—

1. Jaina Literature.
2. Veerasaiva Literature.
3. Brahmana Literature.
4. Poetics and Prosody.
5. Old Kannada Grammar (as in *Sabdamanidarpana*) and History of Language (a general view).

6. History of Literature (a general view).
(Text-books to be prescribed under 1, 2 and 3.)
7. Sanskrit Language and Literature.

Minor Subject—

1. Tamil or Telugu.
(i) Text-books and Grammar.
(ii) Translation from Kannada into the Selected Language and *vice versa*.
2. Cultural and historical studies relating to Karnataka—a general knowledge of Social and Political History, Religious History and Archæology (including Architecture, Sculpture, Iconography, Numismatics and Palæography).

(3) *Sanskrit*

Major Subject—

1. Prescribed text-books in Poetry and Prose, the selections being fairly representative of the Vedic and Epic Literature.
2. One of the Darsanas.
3. Poetics.
4. Grammar and Elements of Comparative Philology.
5. History of Sanskrit Literature and Criticism.
6. Translation and Composition.

Minor Subject as in the Pass Course—

1. Classical Prose—Selections from the works of Dandi, Bana, Subandhu, etc.
2. Classical Poetry—Selections from the works of Kalidasa, Bharavi, Magha, etc.
3. One prescribed Drama and Poetics.
4. Grammar, including a select portion of *Siddhanta Kaumudi*.
5. History of Classical Literature and Criticism with special reference to books prescribed under 1, 2 and 3.

(4) *Persian*

Major Subject—

1. Modern Prose and Poetry.
2. Indo-Iranian Philology.
3. Political History of Persia.
4. Outline of Islamic Philosophy.
5. Sufism.
6. Elements of Avestan Literature.

Or

- History of Islamic Sects.
7. Elements of Arabic Literature.
8. Essay on a subject connected with Persian Literature.

Minor Subject—

- | | |
|---|--------------------|
| 1. Classical Prose and Poetry. | } Same as for B.A. |
| 2. History of Literature and Language. | |
| 3. Translation: English into Persian
and <i>vice versa</i> . | |
| 4. Drama and Fiction. | |

(5) *Avestan and Pahlavi**Major Subject—*

1. Pre-Islamic Religion and Philosophy of Iran.
2. Pahlavi Literature.
3. Pāzand and early Classical Persian up to Suljukid Period.
4. Elements of Vedic Literature.
5. Political History of Pre-Islamic Period.
6. Outline of Greek Philosophy.

Minor Subject—(Same as for B.A.)

1. Prose and Poetry.
2. History of Literature.
3. Translation.
4. Grammar.

(6) *Arabic**Major Subject—*

1. Advanced Grammar.
2. Comparative Study of Semetic Philology.
3. Rhetoric and Prosody.
4. Outline of Islamic Philosophy.
5. History of Islamic Civilization.
6. History of the Development of Islamic Sects.
7. Neoplatonic Philosophy.
8. Essay on a subject connected with the Islamic Arts and Architecture.

Minor Subject—

- | | |
|--|--------------------|
| 1. Poetry and Prose (Classical). | } Same as for B.A. |
| 2. History of Literature. | |
| 3. Translation. | |
| 4. Modern Prose and Poetry (1850 to the present time). | |

(7) *Urdu**Major Subject—*

1. History of Urdu Language and Literature with special reference to the comparative study of Indo-Aryan dialects.
2. Urdu Poetry.
3. Literary Criticism.
4. Drama and Fiction.

5. Prose. Any *one* of the following periods :—
 - (a) Prose before 1857.
 - (b) Sir Sayyad's School.
 - (c) Modern Prose.
6. Essay.
7. Dakhani Literature with special reference to the part played by the Sufis in the development of the language.
8. Rhetoric and Prosody.

Minor Subject—

1. Hindi Language and Literature.
2. Persian Language as developed in India between 1050 to 1750 A.D.
3. Arabic Language and Literature.
4. History of Muslim Rule in India with special reference to the development of Muslim Culture and evolving of Urdu Language.

(8) *History*

Major Subject—

1. History of India up to 1300 A.D.
2. History of India from 1300 A.D.
3. History of Europe from 1789 A.D.
4. British Constitutional History (with documents from 1485 A.D.)
5. A Special Subject.
6. Economics.
7. Politics.
8. Essay.

Minor Subject—(Same as for B.A.)

1. Archæology with special reference to India.
2. History of Civilization.
3. Recent Economic History of India.
4. Public Administration.

Note 1.—Under major subject, separate papers of the Honours standard shall be set in Economics and in Politics.

Note 2.—Under minor subject the papers on recent Economic History of India, and Public Administration, shall be the same as the corresponding papers set for the B.A. (Pass) Degree Examination.

The following is the detailed course of study in History :—

Major Subject—

1. *History of India up to 1300 A.D.*
2. *History of India from 1300 A.D.*

Critical and comparative study of Indian Political History with a knowledge of selected sources and of the Cultural History of India as indicated by the following books :—

Books for Study

- Marshall: *Mohenjo-Daro*, Chapters 1 to 8.
Cambridge Indian History.
 Smith: *Early History of India*.
 Rai Choudhuri: *A Political History of Ancient India*.
 C. Hayavadana Rao: *Mysore Gazetteer*, Vol. II, Part I.
 Farquhar: *Religious Literature of India*.
 Macdonell: *India's Past*.
 S. V. Venkateswara: *Indian Culture through the Ages*, Vol. II.
 Sewell and S. K. Iyengar: *Historical Inscriptions of Southern India*.
 Sarkar: *India through the Ages*.
 Cooper & Co.: *Source Books of Indian History*.
 Isvari Prasad: *Mediæval India*.
 Sewell: *A Forgotten Empire*.
 Garrett and Edwards: *Moghul Rule in India*.
 Sardesai: *Main Currents of Maratha History*.
 Payne: *A History of the Sikhs*.
 Garrett and Thompson: *Rise and Fulfilment of British Rule in India*.
 Roberts: *British India*.
 Dodwell: *A Sketch of the History of India from 1858-1918*.
 Spare: *Indian Constitution and Administration*.

3. *History of Europe from 1789 A.D.*

A critical, comparative and advanced course as indicated by the following:

Books for Study

- Stephens: *Revolutionary Europe*.
 Allison Philips: *Modern Europe*.
 Hazen: *Europe from 1815*.
 Holland Rose: *Development of the European Nations*.
 Mowatt: *Concert of Europe*.

Books for Reference

- Cambridge Modern History*, Vols. 8 to 11.
 Madelin: *The French Revolution*.
 H. A. L. Fisher: *Bonapartism*.
 Cæsaresco: *Cavour*.
 Robertson: *Bismarck*.
 Mariott and Robertson: *Evolution of Prussia*.
 Dawson: *The German Empire*.
 Muir: *Expansion of Europe*.
 Mariott: *The Eastern Question*.
 C. G. Ballard: *Napoleon*.
 Ludwig: *Napoleon*.

4. *British Constitutional History*

Advanced course in British Constitutional History as indicated by the books named under (a) and with a study of the Documents named under (b).

(a) *Books for Study*

Adams: *Constitutional History of England*.

Ogg: *Government of England*.

Medley: *Manual of English Constitutional History*.

Maitland: *English Constitutional History*.

Adams and Stephens: *Select Documents of English Constitutional History*.

(b) *Documents to be Studied*

Charter of Liberties. The Constitution of Clarendon. The Assize of Clarendon. Writ of Summons to a Great Council. Great Charter of Liberties. Provisions of Oxford. The Statute of Westminster I. The Statute of Winchester. Writs of Summons to Parliament. The Commons to originate Money Bills. Electors of Knight of the Shire.

Establishment of the Court of Star Chamber. Act of Supremacy. Establishment of the Court of High Commission. Opinions of the Court of Exchequer in Bate's Case. The Petition of Right.

The Answers of the Judges in the matter of Shipmoney. Act against dissolving the Long Parliament. The Grand Remonstrance. The King's Answer to the Petition accompanying the Grand Remonstrance. Act erecting a High Court of Justice for the Trial of Charles I. Sentence of the High Court of Justice upon Charles I. The Instrument of Government. Test Act. Habeas Corpus Act.

First Mutiny Act. The Bill of Rights. The Act of Settlement. Act of Union with Scotland.

The Septennial Act. Act of Union with Ireland. Catholic Emancipation Act. The Reform Act of 1832. Canadian Union Act. Reform Act of 1867. The Supreme Court of Judicature Act. Reform Act of 1884. Country Councils Act. Australian Commonwealth Act. South African Union. Representation of the Peoples Act. Parliament Act. Women Franchise Act. The Irish Free State Act. The Westminster Act.

Books for Reference

Pollard: *Evolution of Parliament*.

Stubbs: *Constitutional History of England*.

Tanner: *Constitutional History of England*.

Stubbs: *Select Charters*.

Robertson and Gardiner.

Keith: *Documents of the Constitutional History of the British Empire*.

Hall: *Studies in English Official Historical Documents*.

Prothero: *Select Statutes and Constitutional Documents*.

Ramsay Muir.

5. *A Special Subject*

6. *Economics*

(A clear understanding of economic principles and their application to Indian conditions is required.)

Nature and significance of economic science. Economics of wealth and welfare. Development of economic doctrines. Schools of economic thought. Competition and Monopoly.

Production. Consumption. Theory of Value. Distribution. State in relation to economic life. Risk and risk-bearing. Capitalism and Socialism. The problem of unemployment.

Principles of money. Monetary standards. Currency and credit. The money market. Banks. Theory of Central Banking. The credit structure of the principal countries. The trade cycle. Stabilization of prices.

International trade. Theory of International values. Gains from Foreign trade.

National self-sufficiency and State control over external trade. Protection and free-trade. Theory of Foreign Exchange.

Public Finance. Theoretical Problems connected with Public Revenue. Public Expenditure and Public Debts. Economics of Public Utilities.

Books for Study

Marshall: *Principles of Economics*.

Taussig: *Principles of Economics*.

Thomas: *Economics*.

Vera Anstey: *Economic Development of India*.

Books for Reference

Meade: *Economic Analysis of Policy*.

Keynes: *Scope and Method of Political Economy*.

Gray: *Development of Economic Doctrine*.

Cannan: *Review of Economic Theory*.

Knight: *Risk—Uncertainty and Profit*.

Robertson: *Money*.

The Macmillan Report.

Todd: *The Mechanism of Exchange*.

Hawtrev: *Currency and Credit*

Kisch and Elkin: *Central Banks*.
 Ropke: *Cycles and Crises*.
 Douglas and Director: *The Problem of Unemployment*.
 Barret Whale: *International Trade*.
 Dalton: *Public Finance*.
 Silverman: *Taxation, its Incidence and Effects*.
 Jathar and Beri: *Indian Economics*.

7. Politics

(A special study of the Indian Constitution will be required.)

Nature and scope of Politics. Fundamental conceptions of Politics. State—Nationality. Nation. Sovereignty. Government. Law. Liberty—Equality. Rights. Citizenship.

Origin of the State. Inductive and Speculative Theories. Development of European Polity (in outline). History of Political Thought (in outline). Structure of Government, comparatively studied with special reference to England, France, U.S.A. The British Self-governing Dominions and India. Forms of State. Classification of Governments. Legislature. Executive. Judiciary. Theory of the separation of Power. Parties and Party Government. Local Government.

Functions of Government. The Province of the State. Individualism. Socialism. Recent Tendencies. Fascism. Communism.

The League of Nations—History, Organization and Achievement.

Books for Study

Sidgwick: *Development of European Polity*.
 Garner: *Introduction to Political Science*.
 Strong: *Modern Constitutions*.
 Palande: *Introduction to the Indian Constitution*.
 Deyle: *History of Political Thought*.

Books for Reference

Laski: *Grammar of Politics*.
 Marriot: *Mechanism of Modern State*.
 Bryce: *Modern Democracies*.
 Finer: *Theory and Practice of Modern Governments*.
 Ogg: *European Governments and Politics*.
 G. D. H. Cole: *A Guide to Modern Politics*.
 Buell: *New Governments in Europe*.
 Coker: *Recent Political Thought*.
 Gettel: *History of Political Thought*.
 Harris: *Local Government in Many Lands*.
 Keith: *A Constitutional History of India*.
 Ratnaswamy: *The Making of the State*.

McIver: *The State*.

Willoughby: *Modern Governments*.

Joad: *Modern Political Thought*.

Eddie and Lawton: *Indian Constitution*.

Minor Subject—

1. *Archæology*

A GENERAL COURSE IN INDIAN ARCHÆOLOGY

Introductory: Aims and Scope of Archæology. Relation to History and other subjects. Methods in Archæology. Exploration and Survey. Preservation and Conservation. Study and Publication.

Epigraphy.—General Topics. Value for History. Finds, spots and materials of inscriptions. Contents of inscriptions. Varieties of inscriptions. Methods of studying inscriptions. Authenticity. Languages of inscriptions. Eras and Dates.

Palæography.—History of writing in general. Origin of writing in India. History of Brahmi. Nagari. Later Northern alphabets. History of Kannada alphabet. Other southern alphabets. Foreign alphabets in India. Indian numerals.

Select Inscriptions.—Asoka's Rock Edicts 2 and 13. Minor Rock Edict No. 1. Hatigumpha inscription of Kharavela. Ghosundi inscription. Junaghad rock inscription of Rudradaman. Allahabad pillar inscription of the Guptas. Nanaghat inscriptions. Nasik cave inscription of Pulamavi. The Chandravalli inscription of Mayurasarman. Talagunda inscription of Santivarman. Penugonda plates of Madhava II Ganga. Aihole inscription of Pulakesin II. Uttaramerur inscription. Belur Temple inscription of Vishnuvardhana. Sringeri inscription of Harihara I. Seringapatam inscription of Chikka Deva Raya. Kannambadi inscription of Tippu Sultan.

Numismatics.—General principles. Contributions to Indian History. Methods of studying coins. Numismatic publications. Select Indian coins. Punch-marked coins. Indo-Greek and Kushan. Gupta coinage. Coins of sultanate of Delhi. Moghul coins. Chola, Hoysala, Vijayanagara and Mysore coins.

Excavations.—General topics. Importance of excavations. Discovery and survey of sites. Preliminary excavations. Details of excavation. Excavation records. Preservation of evidence. Study and Publication of evidence. Indian ceramics. Progress of excavation in India. Select Indian excavations: Mohenjo-Daro. Taxila. Nalanda. Adichanallur. Chandravalli.

Architecture.—General Principles. Styles of Indian Architecture. Buddhist Architecture. Cave Architecture. Indo-Aryan. Dravidian. Chalukyan. Indo-Moslem. Recent Architecture.

Sculpture and Painting.—Principles of Indian Sculpture. Schools of Indian Sculpture. Gandhara. Gupta. Northern. Mediæval. Pallava. Chalukya. Vijayanagar. Indo-Moslem. Recent Sculpture. Outlines of Hindu Iconography. Chief Vishnu Images. Chief Siva Images. Other important Hindu deities. Jain images. Buddhist images. Painting. Ideals and technique of Indian painting. Schools of Indian painting. Buddhist. Rajput. Moghul. Modern Indian painting.

Books for Study

- Petrie: *Aims and Methods in Archaeology*.
 Marshall: *Indian Archaeological Manual* (Government of India Publication).
Imperial Gazetteer of India, Vol. I (Chapter on Epigraphy).
 Buhler: *Indian Palæography* (Translated by Fleet: *Indian Antiquary*, 1940).
 Bhandarkar: *Carmichael Lectures on Indian Numismatics* (Calcutta University).
 Brown: *Coins of India*.
 Rapson: *Coins of India* (Encyclopædia of Indo-Aryan Research).
 Masters: *Romance of Excavation*.
 Wooley: *Digging up the Past*.
 Fergusson: *Indian Architecture*.
 Stella Kramrish: *Indian Sculpture* (Heritage of India Series).
 Percy Brown: *Indian Painting* (Heritage of India Series).
 Coomaraswami: *Indian and Indonesian Art*.

2. *History of Civilization*

A general study of world history from pre-historic times to the present day, with special reference to cultural conditions as indicated by the following books:

Books for Study

- Thorndike: *A Brief History of Civilization*.
 Hayes, Moon and Weyland: *Brief History of the World*.
 Wells: *Outline of History*.
 De Morgan: *Pre-Historic Man*.
 Breasted: *Ancient Times*.
 T. R. Glover: *The Ancient World*.
 Stobart: *The Glory that was Greece*.
 Stobart: *The Splendour that was Rome*.
 Tappan: *In Feudal Times*.
 Ashley: *Modern European Civilization*.
 Marvin: *Living Past* (Oxford University Press).
The March of Man.

Amir Ali: *History of the Saracens*.
Home University Library: *China and Japan*.
Story of the Nations: *China*.

Book for Reference

Harmsworth: *History of the World*.

3. *Recent Economic History of India*

(Same as for B.A.)

4. *Public Administration*

(Same as for B.A.)

(9) *Politics*

Major—

1. History of Political Thought.
2. Political Theory.
3. Political Organization.
4. Public Administration.
5. Economics.
6. Public Finance.
7. Indian Political Institutions.
8. Essay.

Minor—

1. Constitutional History of England.
2. Jurisprudence.
3. Sociology.
4. Recent Economic History of India.

The following is the detailed syllabus in Politics:—

Major Subjects—

1. *History of Political Thought*

Greek political thought, the Roman contribution, the Mediæval period, St. Thomas Aquinas and Dante, Machiavelli, Political Theory of the Reformation and Counter Reformation, The Divine Right of Kings, Bodin and Grotius, The Social Contract: Hobbes, Locke and Rousseau, Montesquieu, The Theory of the American and the French Revolutions, Natural Rights, Convention and Tradition: Hume and Burke, The Idealist Theory, The Utilitarians, Maine and the Historical Method, Spencer, Value of the Biological conception in Politics, Reaction against individualism, Pluralism, The Theory of Democracy, Socialism,

Evolutionary and Revolutionary Communism, Fascism and National Socialism.

Note.—A knowledge of original authorities is required.

Books Recommended

- Plato: *The Republic*.
 Aristotle: *The Politics*.
 Machiavelli: *The Prince*.
 Hobbes: *The Leviathan*.
 Locke: *On Civil Government*.
 Rousseau: *The Social Contract*.
 Burke: *Reflections on the French Revolution*.
 John Stuart Mill: *On Liberty*.
 Maine: *Ancient Law*.
 Barker: *Greek Political Theory*.
 Barker: *Political Thought in England, 1848–1914*.
 Gettel: *History of Political Thought*.
 Coker: *Recent Political Thought*.
 Davidson: *The Utilitarians*.
 Dunning: *A History of Political Theories*, 3 Vols.
 Englemann: *Political Philosophy from Plato to Jeremy Bentham*.
 Gierke: *Political Theories of the Middle Age* (Translated by F. W. Maitland).
 Graves: *A History of Socialism*.
 Hearnshaw: *The Social and Political Ideas of some great Medieval Thinkers*.
 Joad: *Modern Political Theory*.
 Laski: *Political Thought in England from Locke to Bentham*.
 McIlwain: *The Growth of Political Thought in the West*.
 Merriam and Barnes: *A History of Political Theories in Recent Times*.
 Sabine: *A History of Political Theory*.
 Joad: *Guide to the Philosophy of Morals and Politics*.
 Willoughby: *The Ethical Basis of Political Authority*.
 Mayer: *Political Thought*.
 Maxey: *Political Philosophies*.
 Murray: *History of Political Thought from Plato to the present*.
 Spender: *The Government of Mankind*.
 Laski: *Communism*.

2. Political Theory

Nature and Scope of Politics.—Definition of Politics, Relation between Politics and other Social Sciences, Method: Inductive and Deductive methods, their merits and limitations, Basis of political obligation, Fundamental ideas: Society, State, Nationality and Nation, Sovereignty, Government and Law; Rights, Liberty

and Equality; Citizenship; Duties of Citizenship; Nationalism and Internationalism.

Origins of State: Speculative and Historical theories, the new concept of the State, the democratic *versus* the authoritarian State, The sphere of the State: the purposes of the State and Governmental functions, The individualistic minimum of Governmental functions, the theories of Punishment, The socialistic tendencies, State in relation to Economic life, Property, Associations, Family and Education, Recent trends in functions of Government: Democracy *versus* Dictatorship.

Books Recommended

- Garner: *Political Science and Government*.
 Garner: *Introduction to Political Science*.
 Green: *Principles of Political Obligation*.
 Mill: *Representative Government*.
 Krabbe: *The Modern Idea of the State*.
 Laski: *Grammar of Politics*.
 Laski: *Liberty in the Modern State*.
 Lindsay: *The Essentials of Democracy*.
 Lord: *The Principles of Politics*.
 MacIver: *The Modern State*.
 Ruthnaswamy: *The Making of the State*.
 Sidgwick: *Elements of Politics*.
 Soltan: *The Economic Functions of the State*.
 Tawney: *Equality*.
 Wilson: *Elements of Modern Politics*.
 Lippman: *Public Opinion*.

3. Political Organization

(A) *History of Government*.—The Greek City-State, The Government of Rome, Mediæval European Polity: Feudalism, Theocracy, Mediæval Parliaments, Mediæval City-States, The Renaissance, The Reformation, Absolute Monarchy, The French Revolution, Industrial Revolution, Growth of Nationalism, Democracy, Dictatorships.

(B) *The Organization of Government*.—The classification of Constitutions, The nature of the State: Unitary and Federal, The nature of the Constitution: Rigid and Flexible, Separation of Powers, The Legislature, Parties and Party Government, The Electorate, The Executive, Local Government, Judiciary, Rule of Law, Administrative Law.

(C) *Modern Constitutions*.—Britain, Canada, Australia, South Africa, Dominion Status, France, The U. S. A., Switzerland, Russia, Italy, Germany, India.

Books Recommended

- Buell: *New Governments in Europe*.
Eddy and Lawton: *India's New Constitution*.
Finer: *The Theory and Practice of Modern Government*.
Fowler: *The City-State of the Greeks and Romans*.
Goad and Currey: *The Working of a Corporative State*.
Keith: *The Governments of the British Empire*.
Laski: *Grammar of Politics*.
Laski: *Parliamentary Government in England*.
Munro: *The Governments of Europe*.
Munro: *The Governments of the United States*.
Petrie: *The History of Government*.
Sidgwick: *The Development of European Polity*.
Varadarajan: *The Indian States and the Federation*.
Bryce: *Modern Democracies*.
Marriot: *Mechanism of the Modern State*.
Strong: *Modern Constitutions*.

4. Public Administration

(a) *Introductory*.—The scope and nature of Public Administration.

(b) *Organization*.—

- (1) Evolution and general structure of the Public Services.
- (2) Staff: Conditions of Service, Recruitment, Training, Discipline, Promotion, Organization of Public employees.
- (3) Description of the Organization of various departments and local authorities.
- (4) Problems of management and control—control of Government by Legislature, control of local authorities by the Central Government. Management of public utility services.
- (5) Financial Control.
- (6) Demarcation of functions and areas, between departments, between centre and local authorities, between local authorities.
- (7) Co-ordination.
- (8) The use of the non-official and voluntary associations in administration.

(c) *Functions and Contacts*.—Relations with the public and press, Legislative functions including statutory orders, Judicial functions and relations with the Courts. The State in relation to finance, industry and agriculture, Land Revenue administration. The State in relation to Labour, Public Health, Provision of social benefits like Education, Roads, Housing, Public assistance, Prohibition, control of Credit, Famine relief, Pensions, Public Safety,

Police and Army, Statistics. The State as Purchaser. Raising of funds by the State.

Note.—The principles will be studied with special reference to administration in I.*

(d) *Budget.*—

Books Recommended

Finer: *The British Civil Service.*

Harris: *Local Government in Many Lands.*

Maud: *Local Government in Modern England.*

Report of the Machinery of Government Committee, 1918.

Roy: *Indian Civil Service.*

The Simon Commission Report.

Ghosh: *Public Administration in India.*

Metha: *Public Administration of India.*

White: *Introduction to the Study of Public Administration.*

Willoughby: *Principles of Public Administration.*

Buck: *The Budget.*

5. *Economics*

Same as for History Honours.

6. *Public Finance*

Same as for Economics Honours.

7. *Indian Political Institutions*

(a) *From early times to the British Period.*—Vedic foundations, Post-Vedic life and ideals. *Mauryan Polity*: Monarchy, Ministers and Departments, Provincial Government, Local Government, Justice, Military system. *The Middle Ages*: Rajput polity, Afghan polity, Chola Administration, Institutions of the Vijayanagar Empire. *Mughal Administration*: The Government; its character and aims, the sovereign and the departmental heads, The Treasury and Household departments, Provincial Administration, Taxation of Land. *Later Period*: Maratha Administration, Central, Provincial and Local Government, Finance, Military system, Justice; Mysore under the Wodeyars, Hyder Ali and Tipu Sultan; The polity of the Sikhs.

(b) *The British Period.*—The East India Company: its Constitution and the Administration of its Settlements and Territories. The Diwani and Daul Government in Bengal. The intervention of Parliament, Warren Hastings. The establishment of Organized Administration: Pitt's Act and Cornwallis. The Supremacy of the Company in India and the Charter Acts of 1813 and 1858. The assumption of Government by the Crown; the Golden Age

and Bureaucracy. The Minto-Morley Reforms. The Montague-Chelmsford Scheme. The Working of Dyarchy. The Simon Commission and the Round Table Conferences. The Act of 1935; Main Features. The Federal Scheme. The Central Government, Provinces, the Position of the States. Relation between the Centre and the Units, Federal Finance, Defence. The Services of the Crown. The Judiciary. The Home Government.

Books Recommended

- Appadorai: *Dyarchy in Practice*.
 Banerjee: *Public Administration in Ancient India*.
 Ghoshal: *A History of Hindu Political Theories*.
 Jayaswal: *Hindu Polity*.
 Krishnaswami Aiyangar: *Evolution of Hindu Administrative Institutions in South India*.
 Keith: *Speeches and Documents on Indian Policy, 1750–1921*. 2 Vols.
 Keith: *Constitutional History of India, 1600–1935*.
 Mukherji: *Indian Constitutional Documents, 1600–1918*. 2 Vols.
 Nilakanta Sastry: *The Colas*, Vols. 2, Chapters XVII to XIX.
 Ramachandra Dikshitar: *Hindu Administrative Institutions. Report of the Indian States Enquiry Committee, 1928–29*.
 Sarkar: *Mughal Administration*.
 Sen: *Administrative System of the Marathas*.
The Government of India Act, 1935.
The Montague-Chelmsford Report.
 Venkateswara: *Indian Culture through the Ages*, Vol. II.
 Joshi: *The New Constitution of India*.
 Ramaswamy: *Law of the Indian Constitution*.
 Bose: *The Working Constitution of India*.

Minor Subjects—

1. *Constitutional History of England*

Features of the English Constitution, Theories regarding the origin of the Constitution, The Anglo-Saxon age, the Norman and First Angevin Kings, Administrative system under the Norman and Plantagenet Kings, The Great Charter. The Origin and Development of Parliament, Premature Constitutional Government, the Tudor Monarchy. The 17th Century: Parliament *versus* the King, the Victory of Parliament. The Development of the Cabinet and the Party System, the Civil Service, the Rise of Democracy, Growth of Local Self-Government and the Judicial System in the 19th Century, Development of the Constitution after 1900.

Books Recommended

Adams: *Constitutional History of England*.

Keir: *The Constitutional History of Modern Britain, 1485-1937*.

Maitland: *The Constitutional History of England*.

Jennings: *Cabinet Government*.

Tashwell-Landmead: *English Constitutional History*.

Medley: *Constitutional History of England*.

2. Jurisprudence

Introductory.—The science of Jurisprudence.

Nature and Source of Law.—The kinds of Law, Civil Law, Administration of Justice, The State, Source of Law: Legislation, Precedent, Custom, the end of law.

The Elements of the Law.—Legal Rights, kinds of Legal Rights, Ownership, Possession, Persons, Titles, Liability, Intention and Negligence, Law of Property, Law of Obligations, the Law of Procedure.

Books Recommended

Holland: *The Elements of Jurisprudence*.

Maine: *Ancient Law*.

Pound: *An Introduction to the Philosophy of Law*.

Salmond: *Jurisprudence*, Ninth Edition.

Austin: *Jurisprudence*.

3. Sociology

Same as Paper I, General Principles, for B.A.

4. Recent Economic History of India

(Same as for B.A.)

(10) Economics

Major Subject.—

(1) Economic Principles.

(2) Money.

(3) Structure and Problems of Modern Industry.

(4) Public Finance.

(5) Economic History.

(6) Politics.

(7) A Special Subject.

(8) Essay.

Note.—The special subject will be prescribed from time to time.

Minor Subject—Same as for B.A.

One of the following Groups:—

- (A) Recent Economic History of India.
Elements of Statistics.
History of India to 1300 A.D.
History of India after 1300 A.D.
- (B) Recent Economic History of India.
Elements of Statistics.
Principles of Sociology I.
Principles of Sociology II.
- (C) Recent Economic History of India.
Pure Mathematics I.
Pure Mathematics II.
Applied Mathematics—General Statistics, etc.

The following is the detailed course of study in Economics:—

1. *Economic Principles*

Nature and significance of economic science. Economics of Wealth and Welfare. General Principles of Economic analysis. Theories of Production, Consumption, Value and Distribution. Development of economic doctrines. Schools of economic thought. Theory of Domestic Trade and Foreign Trade. Imperfect Competition. Monopolies. Economic Theory of Socialism.

Books Recommended

Keynes: *Scope and Method of Political Economy*.
Robbins: *Nature and Significance of Economic Science*.
Marshall: *Principles of Economics*.
Pigou: *Economics of Welfare*.
Cannan: *Review of Economic Theory*.
Gray: *Development of Economic Doctrine*.
Knight: *Risk, Uncertainty and Profit*.
Hicks: *Theory of Wages*.
Fisher: *Theory of Interest*.
Taussig: *International Trade*.
Wicksteed: *Commonsense of Political Economy*.
Dalton: *Inequality of Incomes*.
Homan: *Contemporary Economic Thought*.
Suranyi-Unger: *Economics in the Twentieth Century*.
Carr-Saunders: *Population*.
Keynes: *General Theory of Employment, Interest and Money*.
Meade: *Economic Analysis and Policy*.
Skelton: *Socialism*.
Fraser: *Economic Thought and Language*.
Ropke: *Crises and Cycles*.
Roll: *History of Economic Thought*.

Haberler: *The Theory of International Trade.*
 Hall: *The Economic System of a Socialist State.*
 Robinson: *Imperfect Competition.*
 Wiicksell: *Lectures on Political Economy.*

2. Money

Theory of Money. Monetary standards. Principles of Currency and Credit. The price structure and the behaviour of prices. Banking policy and the price level. Central Banking, Commercial Banking and Investment Banking. The main features of the currency and banking organisation of the principal countries. Theory of Foreign Exchanges. Theory of International Prices. Exchange control. Monetary theories of the trade cycle. Stabilisation of prices. Bank for International Settlements.

Books Recommended

The Macmillan Report.
 Hawtrey: *Currency and Credit.*
 Kisch and Elkin: *Central Banks.*
 Angell: *Theory of International Prices.*
Report of the Indian Central Banking Inquiry Committee.
 Coyajee: *The Indian Currency System.*
 Willis and Beckhart: *Foreign Banking Systems.*
 Keynes: *General Theory of Employment, Interest and Money.*
 Haberler: *Prosperity and Depression.*
 Curtis and Townsend: *Modern Money.*
 Sayers: *Modern Banking.*
 Cole: *What everybody wants to know about Money.*
 Durbin: *The Problem of Credit Policy.*
 White: *Money and Banking.*
 Moulton: *Financial Organisation of Society.*
 Lavington: *English Capital Market.*
 Einzig: *Monetary Reform.*
 Hawtrey: *Art of Central Banking.*
 Mises: *Theory of Money and Credit.*
 Edie: *Stabilisation of Business.*
 Gregory: *Gold, Capitalism and Employment.*
 Robertson: *Banking Policy and the Price Level.*
 Burgess: *The Reserve Banks and the Money Market.*
 Lawrence: *Stabilisation of Prices.*
 Spalding: *Foreign Exchange and Foreign Bills.*
 Jathar and Beri: *Indian Economics.*
 Einzig: *Exchange Control.*

3. Structure and Problems of Modern Industry

Industry and Agriculture. The promotion of a public company. Organisation of stock exchange. Organised Produce

Markets. Industrial combinations. International industrial agreements. Industrial fluctuations. Business forecasting. Scientific Management and Rationalisation. Risk and risk-bearing in Modern industry. Economic Transport. Labour Problems and the problem of unemployment. The Tariff and Commercial Policy. Alternative to Capitalism. Economic Planning.

Books Recommended

- Haney: *Industrial Organisation and Combination*.
 Clark and Jenks: *The Trust Problem*.
 Watkins: *Labour Problems*.
 Shields: *Industrial Organisation*.
 Duguid: *Stock Exchange*.
 Mitchell: *Business Cycles*.
 Hardy: *Risk and Risk-bearing*.
 Grunzell: *Economic Protectionism*.
 Lloyd: *Trade Unionism*.
 Jacob Viner: *Dumping*.
 Urwick: *Meaning of Rationalisation*.
 Douglas and Director: *The Problem of Unemployment*.
 Jathar and Beri: *Indian Economics*.
 Lokanathan: *Industrial Organisation of India*.
 Beveridge: *Tariff, the Case Examined*.
 Wootton: *Plan and No Plan*.
 Burrows: *Economic Planning*.
 Slichter: *Modern Economic Society*.
 Marshall: *Industry and Trade*.
 Fenelon: *Railway Economics*.
 Fisk and Peirce: *International Commercial Policies*.
 Zimmerman: *World and its Resources*.
 Smith: *Organised Produce Markets*.
 Robinson: *Structure of Competitive Industry*.
 Clark: *Strategic Factors in Business Cycle*.
 Robertson: *Control of Industry*.

4. *Public Finance*

The theoretical problems connected with Public Revenue, Public Expenditure and Public Debts. Government Finance, the Money Market and the Price Level. Economics of Public Utilities and State Enterprises. Financial Administration. Federal Finance. Economics of Public Works. Financing of Social Insurance. Proposals for Financial Reform.

Books Recommended

- Dalton: *Public Finance*.
 Pigou: *A Study in Public Finance*.
 Lutz: *Public Finance*.

- Findlay Shirras: *Science of Public Finance*.
Report of the Colwyn Committee on National Debt and Taxation.
The Report of Indian Taxation Enquiry Committee.
 Adarkar: *Principles of Federal Finance*.
The Report of the Simon Commission—Layton Memorandum.
 Silverman: *Taxation, Its Incidence and Effects*.
 Gyan Chand: *Financial Administration of India*.
 Glaeser: *Outlines of Public Utility Economics*.
 Jathar and Beri: *Indian Economics*.
 Fagan and Macy: *Public Finance*.
 Thomas: *Evolution of Federal Finance*.
 Grice: *National and Social Finance*.
 Seligman: *Essays in Taxation*.
 Stamp: *Fundamental Principles of Taxation*.
 Plehn: *Public Finance*.
Public Works Policy, I.L.O.
Financial Statement of the Chancellor of the Exchequer.
 Hilton Young: *The System of National Finance*.
 Comstock: *Taxation in the Modern State*.
 Hobson: *Taxation in the New State*.
 De Marco: *First Principles of Public Finance*.

5. Economic History

Main features in the Economic development of the leading countries in the modern age, viz., U.S.A., France, Germany and Japan. Outstanding changes in agriculture and industry, trade and transport, tariffs and commercial policy. The development of international economic relations. The part played by the State in the regulation of economic life.

Books Recommended

- Ogg and Sharp: *The Economic Development of Modern Europe*.
 Birnie: *Economic History of Modern Europe*.
 Knowles: *Economic Development of the 19th Century*.
 Moulton: *Japan*.
 Veyhara: *Industry and Trade of Japan*.
 Culbertson: *International Economic Policies*.
Cambridge Modern History, Vol. VII, U.S.A., Ch. XXII.
Cambridge Modern History, Vol. X, 'Economic Change'.
 Day: *History of Commerce*.
 Fisk and Peirce: *International Commercial Policies*.
 Weber: *General Economic History*, Part IV.
 Herbert: *Economic History of Europe*.
 Donaldson: *International Economic Relations*.
 Unwin: *Studies in Economic History*.
 Toynbee: *Survey of International Affairs*.

Clapham: *Economic Development of France and Germany*.
Hammond: *The Rise of Modern Industry*.
Ashley: *Modern Tariff History*.
Faulkner: *Economic History of the United States*.
Seligman: *Economic Interpretation of History*.
Tawney: *Religion and the Rise of Capitalism*.

6. Politics

Nature and Scope of Political Science. Methods of Political Science. Development of Political Ideas. The Nature of the State. Constituent Elements and Attributes of the State. State, Nation and Nationality. Sovereignty. Theories of the State. Forms and Types of States. Associations and Unions of States. Forms and Types of Government. Elements of Strength and Weakness in Different Forms and Types of Government. The Province of Government. Constitutions. The Electorate. The Legislative Organ. The Executive Organ. The Judiciary. Recent Developments in Political Theory and Practice.

Note.—A sound knowledge of Indian Constitution will be required.

Books Recommended

Garner: *Political Science and Government*.
Laski: *Grammar of Politics*.
Wilson: *Modern Politics*.
MacIver: *The Modern State*.
Sabine: *History of Political Theory*.
Strong: *Modern Constitutions*.
Follett: *The New State*.
Buell: *New Governments in Europe*.
Dicey: *Law of the Constitution*.
Mill: *Representative Government*.
Barker: *Political Thought from Herbert Spencer to present day*.
Coker: *Recent Political Thought*.
Rathnaswamy: *The Making of the State*.
Finer: *Theory and Practice of Modern Government*.
Ghosal: *Hindu Political Theories*.
Keith: *A Constitutional History of India*.
Joshi: *The New Constitution of India*.
Report of the Joint Committee on Indian Constitutional Reforms, 1934.
Bryce: *Modern Democracies*.
Joad: *Guide to the Philosophy of Morals and Politics*.
Mogi: *Theory of Federalism*.
Willoughby: *Modern Governments*.
Keith: *Constitutional Law of the British Dominions*.
Munro: *Governments of Europe*.
Munro: *Government of U.S.A.*
Ogg: *English Government and Politics*.

(11) *Philosophy*(a) *Metaphysics Branch**Major Subject—*

1. History of European Philosophy, Ancient and Mediæval.
2. History of Modern European Philosophy.
3. Metaphysics with special reference to Contemporary Philosophy.
4. Theory of Knowledge.
5. History of Indian Philosophy (exclusive of Vedanta).
6. Vedanta (Advaita, Visistadvaita, Dvaita).
7. Philosophy of Religion (with special reference to India).
8. Essay.

Minor Subject—Same as for the B.A. Degree course.

1. General Psychology.
2. Ethics.
3. Logic.
4. Plato's Republic.

(b) *Social Philosophy Branch**Major Subject—*

1. Ethics.
2. Political Philosophy.
3. History of Ethics and History of Political Philosophy.
4. Indian Ethics and Indian Political Thought.
5. Sociology I (Principles of Sociology).
6. Sociology II (Indian Social Institutions).
7. Philosophy of Religion (with special reference to India).
8. Essay.

Minor Subject—

One of the following Groups:—

- (A)
 1. Anthropology.
 2. Comparative Politics.
 3. General Economics [Paper (I) of Economics at the B.A. Pass].
 4. Social Psychology.
- (B)
 1. General Psychology.
 2. Metaphysics.
 3. Indian Philosophy.
 4. Anthropology or Social Psychology.

(c) Psychology Branch

Major Subject—

1. General Psychology.
2. Systems of Psychology.
3. Experimental Psychology—Theory I.
4. do. do. —Theory II.
5. do. do. —Practical.
6. Essay.

7-8. Any *two* of the following to be prescribed from time to time.

- (a) Mental Measurement.
- (b) Psychology of Industry.
- (c) Psychology of Religion.
- (d) Child Psychology.
- (e) Social Psychology (including Folk Psychology).

Minor Subject—

1. Elements of Metaphysics *or* Principles of Sociology.
2. Comparative Psychology: Animal and Abnormal.
3. Statistics and Scientific Method.
4. Mental Heredity and Physiological Psychology.

The following is the detailed course of study in the several subjects in Philosophy:

(a) Metaphysics Branch

Major Subject—

1. *History of European Philosophy, Ancient and Mediæval*

This should comprise a study of the following philosophers, as covered by the text-books recommended:—

- (1) Early Greek Philosophers up to the Sophists—
Socrates, Plato, Aristotle, Stoics and Epicureans. Plotinus and Neo-Platonism.

- (2) General Influence of Christianity on Philosophy in the Middle Ages—

Influence of Avicenna and Averrhoes on Christian Thought.

Scholasticism of Albert the Great and Aquinas.

Nominalists and Realists. Ockham and Duns Scots.

Decay of Scholasticism.

Roger Bacon and the Birth of Modern Science.

The Influence of the Renaissance on the Development of Philosophic Thought.

Note.—Mediæval Philosophy should cover only a quarter of the whole paper.

Books for Study

1. *Burnet: { *Early Greek Philosophy.*
 { *Greek Philosophy from Thales to Plato.*
2. Caird: *Evolution of Greek Theology.*
3. *Plato: *Phaedrus, Republic, Parmenides, Theaetetus, Sophist, Philebus.*
4. *Aristotle: *Metaphysics*, Books XII–XIII.
5. Wallace: *Outlines of the Philosophy of Aristotle.*
6. Bakewell: *Source Book in Ancient Philosophy.*
7. Stace: *Critical History of Greek Philosophy.*
8. Plotinus: *Enneads*, Book I (Stephen Mackenzie).
9. Erdmann: *History of Ancient and Mediæval Philosophy.*
10. De Wulf: *History of Mediæval Philosophy.*

2. *History of Modern European Philosophy*

1. The general influences which made the birth of Modern Philosophy possible.

2. Lord Bacon and Descartes as founders of Modern Philosophy.

3. The Rationalism of Descartes, Spinoza and Leibnitz with particular reference to their method and the following problems:
The Relation of Mind and Body, Modes and Substance.
God. Monism and Pluralism. Space and Time.

4. The Empiricism of Locke, Berkeley and Hume with particular reference to their method and the following problems:
Substance and Qualities (primary and secondary), Matter and Self, Causality, Space and Time and God.

5. The Relation of Rationalism and Empiricism as leading to the Birth of Idealism in Kant.

6. The Philosophy of Kant with particular reference to the Critical Method and the following problems:—
Space and Time, Categories, Transcendental Dialectic in the Critique of Pure Reason. The main ideas in the Critique of Practical Reason and the Critique of Judgement as bearing on the Teaching of the Critique of Pure Reason.

7. The Philosophy of Fichte and Schelling in so far as they attempt to overcome Kantian Dualism.

8. The Philosophy of Hegel with particular reference to his Dialectical Method, his Conception of Logic, the Triadic Law, the Concept of the Absolute, the Philosophy of Spirit, the Relation of Art and Religion to Philosophy.

9. A Brief Survey of Post-Hegelian Philosophy as developed by Schopenhauer. Nietzsche, Lotze and Herbert Spencer.

*These are particularly emphasized.

Books for Study

1. Hoffding: *History of Modern Philosophy*.
2. Rand: *Modern Classical Philosophers*.
3. Watson: *Selections from Kant*.
3. *Metaphysics with special reference to Contemporary Philosophy*

A prescribed classic is to be studied. But candidates will be expected to have a general knowledge of metaphysical problems as covered by the syllabus in Elements of Metaphysics for the B.A. Degree Examination. They are also expected to have a general knowledge of the different currents of contemporary thought as represented, e.g., by Bergson and James, Bertrand Russell and Alexander, Whitehead and Eddington, Croce and Gentile.

Books for Study

Prescribed Classic—To be prescribed every year.

Books for Reference

1. Perry: *Recent Tendencies in Philosophy*.
2. Bosanquet: *The Meeting of Extremes in Philosophy*.
3. Joad: *Introduction to Modern Philosophy*.
4. The Volumes in the Contemporary Philosophy Series.

4. *Theory of Knowledge*

- I. Nature of Knowledge.
- II. Postulates of Knowledge: Formal and material.
- III. Ways of Knowing.
- IV. The relation of Thought and Language.
- V. Nature of Judgment—
Various Theories of Judgment. Unity of Judgment, various kinds of Judgment and their Interrelation. Negation and Disjunction.
- VI. Nature of Inference.
- VII. Knowledge and Reality—
(1) Idealism.
(2) Pragmatism.
(3) Realism.
(4) Intuitionism. (Losskey's Intuitive Basis of Knowledge.)
(5) The Problem of Truth and Error: Degrees of Truth and Reality; Criterion of Truth; Theories of Truth; Relation of Knowledge to Truth and Reality.

Note.—A comparative study of Theories of Knowledge in Indian Philosophy is expected of candidates.

Books for Study

1. Bosanquet: *Logic*.
 2. Norman Kemp Smith: *Prolegomena to an Idealistic Theory of Knowledge*.
 3. Bradley: *Essays on Truth and Reality* (Epistemological chapters only).
 4. Holt and others: *The New Realism*.
 5. Drake and others: *Essays in Critical Realism*.
 6. Russell: *Our Knowledge of the External World*.
 7. Reid: *Knowledge and Truth*.
 8. *The Philosophy of John Dewey*—Edited by Joseph Ratner (Selections bearing on the Theory of Knowledge).
5. *History of Indian Philosophy* (exclusive of Vedanta),
and 6. *Vedanta*

Topics will be covered in these as in the syllabus in Outlines of Indian Philosophy for the B.A. Degree Examination; but candidates are expected to have a detailed knowledge of them.

Books for Study

1. *Hiriyanna: *Outlines of Indian Philosophy*.
2. *Radhakrishnan: *Indian Philosophy*.
3. *Das Gupta: *History of Indian Philosophy*.
4. Ranade: *Survey of Upanishadic Philosophy*.
5. Deussen: *The Philosophy of Upanishads*.
6. Deussen: *The System of the Vedanta*.
7. Urquhart: *Vedanta and Modern Thought*.
8. *Srinivasachari: *Ramanuja's Idea of the Finite Self*.
9. *Subba Rao, S.: *Essentials of Dvaita* (Natesan & Co.).
10. Subba Rao, S.: *Introduction to his Translation of Sutra-Bhashya*.
11. Keith: *Indian Logic and Atomism*.
12. Krishnaswamy Iyer, K. A.: *Vedanta as the Science of Reality*.
13. Srinivasachari: *The Philosophy of Bhedabheda*.
14. Venkataramiah: *Aitareya Upanishad* (English Translation).
15. Nagaraja Sarma: *The Reign of Realism in Indian Philosophy*.
16. *Srikara Bhashya*: Edited by C. Hayavadana Rao.
17. Paranjoti: *Saiva Siddhanta*.

* These are particularly emphasized.

7. *Philosophy of Religion* (with special reference to India)

I. Introductory—

Philosophy, Science and Religion.

Philosophy of Religion and Theology.

Philosophy of Religion and Comparative Religion.

Philosophy of Religion and Psychology of Religion.

II. Elements of Comparative Religion—

1. Value of the Comparative Study of Religion.

2. Sacred Objects, Sacred Act, Sacred Persons.

3. Tribal Religion, National Religion and Universal Religion.

III. Psychology of Religion—

The Religious Attitude and the Psychological Factors involved therein. Psychology of Mysticism. The question of the Validity of Mystic Experience.

IV. A brief survey of Hinduism (including Sikhism, Brahma Samaj and Arya Samaj), Buddhism, Jainism, Zoroastrianism, Judaism, Christianity and Islam.

V. Nature of Religion—

1. The Nature of Religion: The Bearing of Psychology and Sociology.

2. Theories of Religion and their Critique:

(a) Intellectualist.

(b) Moralist.

(c) Romantic.

(d) Sociological.

3. Positive Statement of the Nature of Religion: Definition.

VI. The Relation of Magic and Religion.

VII. Idea of God in Polytheism. Pantheism. Monotheism. Proofs of the Existence of God: Ontological, Cosmological, Teleological. Emphasis in Contemporary Philosophy on the Nature of God rather than on Proofs. Some modern views: Alexander and Whitehead. "Religion Without God": is it tenable?

VIII. Problems of Divine Nature—

Attributes of God. God and the Absolute. Emanation and Creation. Immanence and Transcendence. The Problem of Evil. The Relation of God and Individual.

IX. Immortality and Future Life—

Primitive and Modern Conceptions.

The Relation of Mind and Body.

Inherent and Conditional Immortality.

X. Doctrine, Dogma and Revelation—

“Revelation”: Its Place in Religion. Mediæval and Modern Views on the Subject of Revelation. Is Revelation necessary for Religion? Can the claims of Reason and Revelation be reconciled? Scholastic attempt.

XI. Personal and Institutional Religion.

Books for Study

1. *Galloway: *The Philosophy of Religion*.
2. J. Bailee: *The Interpretation of Religion*.
3. James: *Varieties of Religious Experience*.
4. Leuba: *A Psychological Study of Religion*.
5. *Pratt: *Religious Consciousness*.
6. Royce: *Sources of Religious Insight*.
7. Otto: *The Idea of the Holy*.
8. Woodburne: *The Religious Attitude*.
9. H. D. Bhattacharya: *Foundations of Living Faith*.
10. Carl Clemen: *Religions of the World*.
11. E. E. Kellett: *Short History of Religion*.

Minor Subject—

- | | |
|------------------------|--|
| 1. General Psychology. | } Same as for the B.A. Degree Examination in Philosophy. |
| 2. Ethics. | |
| 3. Logic. | |
| 4. Plato's Republic. | |

(b) Social Philosophy Branch

*Major Subject—*1. *Ethics*

The topics to be covered are the same as in the Ethics syllabus for the B.A. Degree Examination. But a detailed knowledge is expected of the Honours candidates. They are also expected to be familiar with the general standpoints of recent authors, such as A. E. Taylor, Alexander, G. E. Moore, Croce, Bergson, and Nicolai Hartmann.

Books for Study

1. *Kant: *Critique of Practical Reason and Metaphysics of Morals*.
2. *Green: *Prolegomena to Ethics*.
3. *Sidgwick: *Methods of Ethics*.
4. Taylor: *Problem of Conduct*.
5. Alexander: *Moral Order and Progress*.
6. Moore: *Principia Ethica*.

*These are particularly emphasized.

7. Croce: *Philosophy of the Practical*.
8. Leon Roth: *The Science of Morals*.
9. Nicolai Hartmann: *Ethics*.
10. Sturt: *Moral Experience*.
11. Westermarck: *Origin and Development of Moral Ideas*.
12. *Aristotle's *Nicomachean Ethics*.
13. *Plato's *Republic*.
14. *Sidgwick: *History of Ethics*.
15. Rand: *Classical Moralists*.
16. Wundt: *Ethical Systems*.
17. Lecky: *History of European Morals*.

2. Political Philosophy

1. Distinction between Political Science and Political Philosophy. Relation of Politics to Sociology and Psychology.
2. The Concept of the State. Its basis in Force or Will. The Concepts of the General Will and the Will of All. The Concept of Liberty.
3. The Relation of the State to Morality. Critique of the Concept of the State as Super-moral.
4. Type of the State: Monarchy, Aristocracy, Democracy.
5. The Ethical Value of Democracy. The Relation of Equality and Freedom. The Weaknesses of Democracy. Is Genuine Democracy Possible?
6. Influence of Economics on Modern Politics. The Relation of Democracy and Socialism. Different Types of Socialism: Fabianism, Syndicalism, Communism.
7. The Philosophy of Materialism underlying Communism.
8. Modern Reactions against Democracy—
 (a) Fascism and National Socialism.
 (b) New Individualism.
9. The Concept of the World State. The Ethics of War. The League of Nations.

Books for Study

1. *Green: *Lectures on Political Obligation*.
2. Hobhouse: *Metaphysical Theory of the State*.
3. Ritchie: *Natural Rights*.
4. MacIver: *The State*.
5. *Laski: *Grammar of Politics*.
6. *Selections from Lenin*, edited by Pierree Passcal (Martin Lawrence).
7. Bukharin: *Historical Materialism*.
8. Ramsay Macdonald: *Socialism*.

*These are particularly emphasized.

9. Laski: *Communism*.
10. *Dunning: *Political Theories* (Selections).
11. *Barker: *Political Thought from Spencer to To-day* (Home University Library).

3. (a) *History of Ethics*

1. Greek Ethics with particular reference to Socrates, Plato, Aristotle, Stoicism and Epicureanism.
2. Christian Ethics with particular reference to St. Augustine and Aquinas.
3. Modern Ethics with particular reference to the Cambridge Platonists, the Moral Sense School, Richard Price, Bishop Butler, Hume, Kant, Hegel, Bentham, Utilitarians, Herbert Spencer.

Books for Study

Same as those prescribed for Ethics.

(b) *History of Political Philosophy*

1. Greek Political Thought as in Plato and Aristotle.
2. Early Christian Political Thought as in St. Augustine.
3. The Political Philosophy of the Scholastics.
4. The Conflict between the Empire and the Papacy with particular reference to Dante.
5. Rise of Independent Political Thought as in Bodin.
6. Social Contract Theory: Hobbes, Locke, Rousseau.
7. Reaction against the Social Contract Theories as in Bentham and Burke.
8. Idealistic Political Philosophy as in Hegel and his followers.

Books for Study

Same as those prescribed for Political Philosophy.

4. (a) *Indian Ethics*

I. Nature and scope of *dharma* as conceived in the various systems. Its relation to morality. Early moral notions like *rita* and *satya*. Classification of *dharma*s into—

- (i) *Sadharana* or those common to all: Life of virtues.
- (ii) *Visesha* or those relative to particular *varnas* or classes of Society, and *asramas* or stages of life.

Aim and Significance of the classification. Morality of Indian Social Institutions. *Nitya*, *naimittika*, *pratisiddha* and *kamya karmas*. Source of knowledge of *dharma*:

* These are particularly emphasized.

- (1) Revelation (*sruti*). View of *vidhi* as (i) a divine command and (ii) an impersonal imperative.
- (2) Intuition of sages (*yogi-pratyaksha*).
- (3) Practices of the wise (*sishtachara*).
- (4) Reason.

II. Metaphysical Background of Indian Ethics. Conception of the individual or Jiva as a transmigrating personality. Origin and history of the Karma doctrine. Its ethical basis. Free will and determinism. *Samsara* and Moral Order.

III. Interrelation of cognition, feeling and conation. Voluntary and other forms of activity. The object of moral judgment. Analysis of Will. Springs of action according to the different systems. Reason and moral action.

IV. Standard of Moral Judgment:—

(1) Standard as Right (*karya*): Prabhakara's view of *niyoga* and *apurva*. Duty for duty's sake.

(2) Standard as Good (*ishta*)—(i) End as present pleasure (*preyas*). Egoistic hedonism of the Charvaka. Natural and political sanctions the only deterrents. (ii) End mainly as pleasure in a future life (*svarga*). Eudæmonism of the Bhattas. (iii) End at self-realization (*moksha*) through self-conquest. Place of Asceticism in Indian Ethics. Jaina and Buddhistic Schemes of Discipline. Value of the doctrine of *ahimsa* or non-injury. Ideal of Bodhisattva. *Yama* and *niyama*. *Nishkama karma* as taught in the *Gita*. Importance of the teaching in the history of Hindu Ethics. *Lokasangraha*. Bhakti in relation to ethical conduct. Different views of self-realization.

V. The place of morality in the Indian scheme of life.

Books for Reference

1. E. W. Hopkins: *Ethics of India*.
2. S. K. Maitra: *Ethics of the Hindus*.

(b) Indian Political Thought

1. General Features of Ancient Hindu Polity. Its Relation to Religion.

2. Early Tribal Organization and Early Monarchy.

3. Hindu Polity in its developed form as in *Kautilya's Artha Sastra*.

4. The Chief Concepts of Hindu Polity.

5. Hindu Republican Organizations.

6. Influence of Jainism and Buddhism on Political Theory.

7. Village Organisation: Its Importance in Indian History. Its Relation to the Central Government.

8. Study of Hindu Political Institutions with reference to the Concepts of Western Political Thought.

Books for Study

1. *The *Bhagawad Gita*.
2. Bramha: *Philosophy of Hindu Sadhana*.
3. *Maitra, S. K.: *Hindu Ethics*.
4. *Manu's Code.
5. *Kautilya's *Artha Sastra*.
6. Goshal: *Hindu Political Theories*.
7. Rangaswami Iyengar, K. V.: *Ancient Indian Polity*.
8. Jayaswal: *Introduction to Hindu Polity*.
9. Binoy Kumar Sarkar: *Comparative Politics*.
10. Majumdar: *Corporate Life in Ancient India*.
11. Bandyopadhyaya: *Development of Hindu Polity and Political Theories*.

5. *Sociology I—Principles of Sociology*

The topics to be covered are the same as in the Principles of Sociology I Paper Syllabus for the B.A. Degree Examination. But a detailed knowledge is expected of the Honours candidates.

Books for Study

1. *Blackmar and Gillin: *Outlines of Sociology*.
2. *Park and Burgess: *An Introduction to the Science of Sociology*.
3. Giddings: *Principles of Sociology*.
4. Giddings: *Inductive Sociology*.
5. Ross: *Principles of Sociology*.
6. George: *The Relations of History and Geography*.
7. Earnest Barker: *National Character*.
8. Thomson and Geddes: *Evolution* (Home University Library).
9. Thouless: *Social Psychology*.
10. Westermarck: *History of Human Marriage*.
11. Wadia, A. R.: *The Ethics of Feminism*.
12. Gregory: *The Colour Problem*.
13. Gregory: *Human Migration and the Future*.
14. *Jerome Davis and Barnes, H. E.: *Introduction to Sociology*.
15. Jerome Davis and Barnes, H. E.: *Readings in Sociology*.
16. Abul Hasanat: *Crime and Criminal Justice* (The Standard Library, Dacca).

6. *Sociology II—Indian Social Institutions*

The topics to be covered are the same as in the Indian Social Institutions Syllabus (Principles of Sociology: II Paper A) for the

* These are particularly emphasized.

B.A. Degree Examination. But a detailed knowledge is expected of the Honours candidates.

Books for Study

1. **Manu's Code*.
2. *Viswanathan: *Racial Synthesis in Hindu Culture* (Sections on Caste).
3. **Women's Rights under the Hindu Law* (Report of the Committee appointed by His Highness the Maharaja of Mysore).
4. *Ghurye: *Race and Caste in India*.
5. Appaswamy: *Legal Aspects of Social Reform*.
6. *Karandikar: *Hindu Exogamy*.
7. Raghunatha Rao: *The Aryan Marriage*.
8. *Imperial Gazetteer*, Vol. I (Section on Caste).
9. Mulla: *Hindu Law*.
10. Mulla: *Muhammadan Law*.
11. Binoy Kumar Sarkar: *Positive Background of Hindu Sociology*.

7. *Philosophy of Religion*

Same as in the Metaphysics Branch.

Minor Subject—

One of the following groups:—

A. 1. *Anthropology*

Same as for the B.A. Degree Examination in Sociology.

2. *Comparative Politics*.

Same as for the B.A. Degree Examination in Politics.

3. *General Economics*

Same as for the B.A. Degree Examination in Economics.
(Paper I).

4. *Social Psychology*

I. Scope and Standpoints of Social Psychology and Sociology.

Standpoints.—

- (1) Early Views of Group Life. Theological Explanation of Society.
- (2) Metaphysical View of Social Life: Plato—Indian Theory of Gunas.
- (3) Political: Social Contract Theories.

* These are particularly emphasized.

- (4) Judicial: Society as an Ensemble of Public Law Rights, etc.
- (5) Biological.
- (6) Psychological:
 - (a) Adam Smith: Sympathy.
Ratzenhofer: Interest.
Trade: Imitation.
Trotter: Herd Instinct.
Verben: Instinct of Construction.
McDougall: Primary Instincts.
 - (b) Social Psychology as a Study of Occupational Attitudes.
 - (c) Psycho-Analytic Standpoint.
 - (d) Social Psychology as the Study of the Group Mind: Durkheim, McDougall.
 - (e) Social Psychology as the Study of the Social Personality.

II. Social Setting of Human Behaviour.

III. Biological Basis of Human Behaviour.

- IV. Psychology of Individual Behaviour:
- Unlearned Behaviour—Reflexes, Instincts. The Feelings and Emotions and the Unconscious in Man's Behaviour.
 - Behaviourism and Purposivism.
 - Habits and Sentiments. Will.
 - Cognitive Processes.
 - Personality: Individual Differences and Social Behaviour.

V. The Development of the Social Personality, Personality and Group Participation—

- (1) Language and Social Interaction—Language in Communication and Culture.
- (2) Personality as conditioned by the Play Life of the Child. Theories of Play.
- (3) Personality as conditioned by the Primary Group Contacts. Neighbourhood. Congenality Group. The Gang.
- (4) Personality as conditioned by Secondary Groups. The School, Religious and Fraternal Institutions. The Community and Political Institutions.
- (5) Personality as conditioned by Occupational Groups. Difference in Outlook due to Industrialization. Psychology of the Working Classes. Capitalist *versus* Labourer.
- Psychology of the Professional Classes: The Medical Profession, the Legal Profession, the Engineer's Profession, the Teacher's Profession.

the Ministerial Profession. Occupational Ego-centrism: Its Nature.

- (6) Personality and Culture. Stereotypes. Myths and Legends. Psychology of Myth-making and the Engineer's Profession, the Teacher's Profession, Utopias, Ideologies.
- (7) How an individual imbibes or develops Prejudices. Nature of Prejudice, Psychology of Prejudice. Illustrations of certain Prejudices:

- (a) White and Negro.

White and Oriental Races: China, Japan and India.

- (b) Caste Prejudices: The Touchable and the Untouchable.

- (c) National Prejudices. Anti-foreign Prejudices.

- (d) Religious Prejudices.

- (e) Prejudices among Economic Groups.

- (8) Personality and Leadership. Nature of Leadership. Psychology of Leadership. Psychology of the Radical Leader, the Conservative Leader, the Scientific Leader.

Introversion and Extroversion in relation to Different Types of Leaders.

The Leader and the Masses.

VI. The Behaviour of Men as Members of Groups and of Crowds—

- (a) Types of Crowds, (b) Characteristics of Crowds, (c) Crowd Formation, (d) Influence of Crowds upon the Individual. Causes of the Change in the Individual as an element in a Crowd:

VII. The Psychology of the Audience.

VIII. Fashion as Collective Behaviour.

IX. Public Opinion.

X. Social Neurosis.

XI. Applied Social Psychology—

Social Psychology and Economics.

Social Psychology and Religion and Morality.

Social Psychology and Art.

Social Psychology and Social Hygiene.

Books for Study

- 1 Young: *Social Psychology*.
2. *McDougall: *Group Mind*.
3. *Mukherjee and Sen Gupta: *Social Psychology*.

*These are particularly emphasized.

B. 1. General Psychology

Same as for the B.A. Degree Examination.

2. Metaphysics

Same as for the B.A. Degree Examination.

3. Indian Philosophy

Same as for the B.A. Degree Examination.

4. Anthropology or Social Psychology

Anthropology: Same as for the B.A. Degree Examination in Sociology.

Social Psychology: Same as for Social Psychology under Group A, page 257.

(c) Psychology Branch

Major Subject—

1. General Psychology

The topics prescribed for the B.A. Degree course to be studied in greater detail from a historical and critical standpoint, specially with reference to the cognitive processes.

Books Recommended for Study

1. McDougall, W.: *Outlines of Psychology*.
2. Spearman, C.: *Psychology Down the Ages*.
3. Flugel, J. C.: *A Hundred Years of Psychology*.

2. Systems of Psychology

Historical—

- A Brief Survey of Psychology through the Centuries.
- Introspective Psychology and the Existential School.
- The Associationist School of Psychology.

Behaviourism—

- Pre-Behaviouristic Trends to exclude Introspection from Psychology.
- Russian Objectivism and Conditioned Reflex.
- Watson's Behaviourism: His general assumptions examined.
- The Behaviouristic Account of Learning, Thinking, Instincts, Emotions, and Personality.
- Significance of Behaviourism.

The Gestalt or Configuration Psychology—

- Its Assumptions and Methods. The Concepts of Figure and Ground.
- The Laws of Gestalt Formation.
- Applications of the Gestalt Principles to the Psychology of Learning, Perceptual-Illusions and Instincts.

The Neogenetic School—

Its Assumptions and Methods.

Laws of Neogenesis—Qualitative and Quantitative.

Applications of Neogenetic Laws to the Psychology of Perception, Learning, Reasoning and Intelligence.

Psycho-Analysis and Related Schools—

Freud's Psychology and its application to Dreams, Neuroses, Errors, Laughter, etc. The Fundamental Assumptions of Freud examined. Modifications of the Freudian System by Adler, Jung and others.

Purposivism or Hormic Psychology—

Its Assumptions and Methods. Comparison with Behaviourism. Examination of the Concept of 'Instinct'

Experimental Methods in Psychology—

Relation of General to Experimental Psychology.

Psychology in relation to other Sciences: Biology, Physiology, Politics, Economics, Aesthetics, Science of Values.

Relation of Psychology to Metaphysics.

Books Recommended for Study

1. Woodworth, R. S.: *Contemporary Schools of Psychology*.
2. Miller: *Psycho-Analysis and its Derivatives*.
3. Watson, J. B.: *Psychology from the Standpoint of the Behaviourist*.
4. Hartmann, G. W.: *Gestalt Psychology*.
5. Thomas, F. C.: *Knowledge and Ability*.

3. *Experimental Psychology—Theory I*

Standpoint.—Conditions of experiment in Psychology. Place of introspection in Psychology.

Attention.—Span, Fluctuation, Division and Distraction. Conditions favourable to securing sustained attention.

Sensation.—Cutaneous sensibility. Analysis of visual and auditory experiences. Theories of colour vision and of hearing. Sensations of taste and smell.

Sensory acuity.

(Woodworth: Chapters 20, 21 and 22.)

(Myers: Chapters 2, 4, 7 and 18.)

Psycho-Physical Methods.—Experience of identity and difference.

(Myers: Chapter 19.)

(Woodworth: Chapters 17 and 18.)

Space Perception.—Visual perception of size, depth, direction and form. Figure and ground. Factors of advantage in all perception. General conditions of visual illusions.

(Woodworth: Chapters 25 and 26.).

(Myers: Chapter 22.)

Time Perception.—Estimation of time intervals. Effects of pause, surprise, expectation, etc.

Rhythm. Subjective accentuation.

(Myers: Chapter 23.)

Memory and Retention.—Experimental methods—Recall and Recognition. Perseveration. Curve of Forgetting. Reminiscence; Memory for visual forms. Theories of forgetting.

(Woodworth: Chapters 2, 3 and 4.)

Persistence of motives as revealed by recall of incomplete experiences. Effect of pleasant and unpleasant experiences on recall. Influence of language on recall.

(Crafts: Chapters 21 and 23.)

Imagery and Imagination.—Types of imagery. Spontaneous and voluntary memory imagery. Eidetic Imagery. Fertility of imagination. Constructive ability. Imagery and Thought.

Learning.—Nature of the learning process. The learning curve. Factors influencing efficiency of learning. Transfer of training. Interference and retro-active inhibition.

(Bills: Chapters 9 to 13.)

(Woodworth: Chapters 6, 8 and 9.)

4. *Experimental Psychology—Theory II*

Simple and Conditioned Reflexes.—Pavlov's results and conceptions. Types of conditioning. Conditioning of emotional behaviour. Significance of the conditioned response.

(Woodworth: Chapter 5.)

Reaction Time.—Types of reaction. Factors influencing speed of reaction. Associative reaction time.

(Woodworth: Chapters 14 and 15.)

Work and Fatigue.—Muscular and mental work. Features of work curve. Nature of fatigue. Symptoms and causes of fatigue. Factors influencing efficiency of work.

(Bills: Chapters 21 to 26.)

Thought.—Nature of thought. Thought and language. Concept formation. Inductive reasoning. Problem solving situations. Deductive reasoning. Errors in reasoning.

(Boring and Langfeld: Chapter 18.)

(Woodworth: Chapters 29 and 30.)

(Crafts: Chapter 24.)

Intelligence.—Verbal and non-verbal tests. Concept of I. Q. Theories of Intelligence.

(Ballard: *Group Tests of Intelligence.*)

Feelings and Emotions.—Elementary and mixed feelings. Methods of impression and expression. Vocal and facial expressions of emotions. Bodily changes in emotion. The Psychogalvanic Reflex.

(Woodworth: Chapters 10 to 13.)

(Crafts: Chapter 7.)

Experimental Aesthetics.—Nature of æsthetic judgment. Colour and form preferences.

(Woodworth: Chapter 16.)

Personality Traits.—Methods of study. Personality Types. Measurement of attitudes, interest, emotional stability and character qualities.

(Symonds: Diagonising Personality and Conduct.)

Volition.—Methods of experiment. Analysis of the process of will.

Vocational Guidance and Selection.—Manual dexterities, Mechanical, Musical, Mathematical, Scientific, Social and Lingual aptitudes.

Books Recommended for Study—Theory I and II

Collins and Drever: *Experimental Psychology*.

Meyers, C. S.: *Experimental Psychology*.

Woodworth, R. S.: *Experimental Psychology*.

Boring, Langfeld and Weld: *Psychology*.

Bills, A. G.: *General Experimental Psychology*.

Crafts and others: *Recent Experiments in Psychology*.

Garrett, H. E.: *Great Experiments in Psychology*.

Boring, E.: *A History of Experimental Psychology*.

5. *Experimental Psychology—Practical*

List of additional experiments (to be conducted by students in the Psychology Honours class).

Vision.—Colour mixture. After-images. Blind spot. Mapping the colour zones.

Audition.—Analysis of auditory experiences. Pitch Discrimination, Beats, Combination tones, and masking.

Taste and Smell.—Identification and analysis of flavours.

Cutaneous Sensibility.—Mapping thermal pressure and pain spots.

Sensor Acuity.—Absolute and differential threshold experiments on colour sensitivity, loudness and weight-lifting. Two-point discrimination. Experience of identity and difference.

Space Perception.—Auditory localisation. Localisation of touch and tactual form perception. Stereoscopic vision. Depth

and Solidity. Retinal disparition. Visual form perception. Figure and ground. Experiment to illustrate the Gestalt Principles of Proximity, Similarity, Common Destiny, Unity, etc. (Hartmann).

Time Perception.—Estimation of temporal intervals. Filled and empty intervals. Sense of Rhythm.

Perception of Movement.—Apparent Movement. Passive and Active Movement.

Errors in Perception.—Factors in visual illusions. Illustrations of substitution of fundamentals arising from difficulty in abstraction and from expectancy.

Memory and Learning.—Perseveration. Tetro-active inhibition. Effect of feeling and language on recall. Transfer of training. Factors in conditioning.

Higher Thought Processes.—Speed of neogenetic processes. Images and meaning. Images and problem solving. Generalization.

Feelings and Emotions.—Hedonic summation and contrast. Changes in breathing and pulse beats accompanying emotional experience. Psychological correlate of the Psycho-galvanic Reflex. The Applications of the P. G. R. for crime detection and character analysis.

Volition.—"Will" tests of control of breathing, and the wink-reflex, dynamometre and stance tests.

Vocational Guidance and Selection.—Tests of Manual, Mechanical, Musical, Scientific, Literary and Social abilities.

Aesthetic Appreciation.—Analysis of the beautiful and the humorous from pictures and cartoons.

Books Recommended for Reference

1. Boring, Langfeld and Weld: *A Manual of Psychological Experiments.*
2. Valentine, W. L. and others: *Student's Guide to Psychology.*
3. Myers, C. S.: *Text-book of Experimental Psychology, Part II.*
4. Kline and Kline: *Psychology by Experiment.*

6. *Essay*

7 and 8. Any two of the following subjects:—
(to be prescribed from time to time)

A. *Mental Measurement.*—

Part I—Measurement of Intelligence

Introductory—

Current Errors in the Estimates of Intelligence.

Principles of Valid Measurement

Principles of Intelligence Test Construction—

Binet-Simon Tests; Group Verbal Test; Non-verbal Group Tests; Individual Performance Tests.

Pre-School Test. Developmental Tests. Problem-solving Tests.

Definition of Intelligence; Nature of Intelligence.

The Factors of Language, Information, Speed, Memory and Motivation in relation to Intelligence.

Theories of Intelligence of Thorndike, Thompson and Spearman.

Distribution of Intelligence; Growth-Curve of Intelligence.

Is 'Intelligence' Innate?

Value of Intelligence Measurements for Education and Industry.

Part II—Personality and Character Diagnosis

Introductory—

Significance of the Diagnosis of Conduct. Common Errors in Character Estimates.

Method of Interview and Observation.

Questionnaire Methods of Adjustment, Attitudes and of Interest.

Free Association Methods of Personality Diagnosis, Psycho-Analytical Methods of Diagnosing Conduct and Feelings.

Physiological Measures of Emotional Expressions.

Objective Tests of Character Traits. Tests of Honesty, Suggestibility, and of Aggressiveness.

Rating of Home and Socio-Economic Environment.

Applications to Vocational Guidance and Selection.

Books Recommended for Study

1. Terman, L.: *Measurement of Intelligence*.
2. Ballard, P.: *Group Tests of Intelligence*.
3. Dreyer and Collins: *Performance Tests of Intelligence*.
4. Gassell, A.: *Mental Growth of the Pre-School Child*.
5. Symonds, P. M.: *Diagnosing Personality and Conduct*.
6. Spearman, C.: *Abilities of Man*.

B. Psychology of Industry.—

Introductory—

Scope, Data and Methods.

Environment and Efficiency—

Temperature, Air, Humidity, Ventilation, Illumination, Noise Level in relation to the Efficiency of the Industrial Worker.

Industrial Fatigue—

Methods of Fatigue Study; Length of the Working Day and the Week; Rest Pauses and Intervals in relation to

Output; Speed of Work; Movement Study and the Elimination of Wasteful Movements, and Fatiguing Postures.

Motivation in Industry—

The Acquisitive Tendency; Self-assertion; the Constructive Tendency; Pugnacity and Escape. Systems of Payment in relation to the Happiness and Efficiency of the Worker.

Industrial Unrest—

Psychological Causes of Industrial Unrest. Conflict and Repressions. Lack of Opportunities for the Self-expression. Welfare work.

Vocational Selection—

Social and Economic Importance of Minimising Turnover of Labour. Current Methods of Staff Selection.

Scientific Methods of Selection.

Reliability and Validity of Vocational Tests.

Vocational Guidance—

On the Importance of a Proper Choice of a Career. Psychological Tests for Vocational Guidance. Experiments in Vocational Guidance.

Advertisement—

Favourable conditions for the Attraction and Securing of attention in Newspaper Advertisement.

Books Recommended for Study

1. Myers, C. S.: *Industrial Psychology* (Home University Library).
2. Earle, F. M.: *Methods of Choosing a Career*.
3. Hollingworth: *Vocational Psychology—its Problems and Methods*.
4. Oakley and others: *Handbook of Vocational Guidance*.
5. Moore and Hartman: *Readings in Industrial Psychology*.

C. *Psychology of Religion*.—

Part I—Introductory

1. Introduction: Some Objections to the Study of Psychology of Religion considered. The Scope of the Subject and Methods of Study. The Psychological Standpoint.

2. Definition of Religion: The difficulty of defining Religion. Universal Characteristics of Religion: Objective and Subjective Characteristics. Institutional and Personal Religion.

3. A Brief Survey of the Development of Religion.

(a) Origins of Religion: As an outgrowth of uncertainty—as a reaction to natural forces—as a product of Metaphysical interests. Psychological Sources of Primitive Religions. Origin of Religion no Test of its Validity.

(b) Belief in God and Immortality. Causes of Disbelief and Doubt.

4. Cult Practice: As an Outlet to Emotional Life and Aesthetic Interests. Psychology of Religious Sects. Group Worship. Reverence for Sacred Symbols. Music and Chanting. Sacrifices and Offerings. Crowd Psychology and Revivals. The Qualifications of a Preacher. The value of Preaching.

5. Psychological Principles: Instincts—Development of Sentiment. Conscience. The Unconscious. Conflicts. The Mechanisms of Transference, Projection and Sublimation. The Divided Self. Suggestibility. Psychology of Belief, Doubt, Insight, Intuition, Illusion, Hallucination and Errors in Reasoning. Logic of the Unconscious Mind.

Part II—The Development of Religion in the Individual

(a) The Normal

1. The Religious Development of the Child.

2. The Religious Development of the Adolescent. Characteristic Difficulties: (a) Disposition to Doubt, (b) Tendency to be dogmatic, (c) Excessive Emotionality.

3. The Normal Religious Development of the Adult: The Affective, Rational and Moral Elements.

4. Prayer and Worship: The prompting to Prayer. The Objects of Prayer. The Efficacy of Prayer. The Interpretation of Prayer. Objective and Subjective Worship.

(b) The Exceptional

1. Conversion: As an awakening. Pre-conversion States. The Conversion States. Types of Conversion. Factors at work in Conversion.

2. Saintliness: Characteristics: (a) Peace of Mind, (b) Charity, (c) Fortitude and (d) Purity of Life.

Asceticism: Chastity, Poverty and Obedience. The Sense of Sin.

3. Mysticism: Description and Classification. Favourable conditions for the Occurrence of Mystic Experience. The Ecstasy. The value of the Mystic Findings. The Place of Mysticism.

4. Pathology of Religion: Psycho-analysis and Religion. Pathological Conversions. Sadistic Components.

Part III—Conclusion

1. Summary of Religious Characteristics. Uneasiness and Deliverance. Meaning and Purpose of Religion.
2. Religion and Morality. Religion and the State. Religion and Science.
3. The Future of Religion.

Books for Study

1. Josey, C. C.: *The Psychology of Religion* (Macmillan).
2. Pratt, J. B.: *The Religious Consciousness* (Macmillan).

Books for Reference

1. Thouless, R. H.: *An Introduction to the Psychology of Religion* (pp. 102–186).
2. Ames, E. S.: *The Psychology of Religious Experience* (pp. 33–116).
3. James, W.: *Varieties of Religious Experience* (pp. 259–429).
4. Sante De Sanctis: *Religious Conversion* (pp. 27–127).
5. Leuba, J. H.: *Psychology of Religious Mysticism* (pp. 1–46 and 191–299).

*D. Child Psychology.—**Introductory—*

Data and Source Materials of Child Study.

Methods of Child Study: Observation; Biographical Method; Questionnaire Method; Case History Method; Experimental Methods.

The Concepts of Heredity, Environment, Maturation, Development, Training and Learning Valences.

The New Born Child: His Reflexes: Reactions to Sensory Stimuli; Emotional Responses.

Sensori-Motor Development of the Infant—

Muscular and Locomotor Responses. Sensory Discrimination.

Emotional Development—

Early Emotional Patterns; Development of Specialised Emotional Responses. Child's Fear, Anger, Jealousy, Laughter, etc. Scale of Emotional Development.

Social Development—

Early Signs of Social Response; Group Formation and Conflicts in Children's Societies. Leadership. Influence of Environmental Factors. Scale of Social Development.

Language Development—

The First Word. Growth in Vocabulary. Effect of Environmental Conditions on Language Development. Sex-differences in Language Development. Scales of Language Growth.

Development of Thinking and Reasoning—

Characteristics of Child's Thinking. Child's Understanding as revealed by its Questions and Definitions. Children's Beliefs.

Growth of Intelligence—

Measurement and Prediction of Individual Differences in Mental Ability.

The Determination of D. Q. and J. Q.

Reliability and Validity of Pre-School Mental Test. The Effect of Health, Nutrition, Birth Order, Size of the Family, Play Companions, Parental Attitudes on the Growth of Intelligence.

Play and Imagination of Children—

Functions of Play. Stages in the Development of Play. Children's Imagination as indicated in their Drawings, Story-interest and Dreams.

Development of Personality and Character—

Constancy of Behaviour Patterns. Emotional Stability. Self-reliance. Aggressiveness. Submissiveness. Introversion and Extroversion in Children.

Moral Development—

The Child's Concept of Good and Bad. Effect of Adult Prohibitions as commands. Factors which promote Self-control. Personality. Aberrations of Childhood. Causes of Juvenile Delinquency.

Books Recommended for Study

1. Jersild: *Child Psychology*.
2. Stoddard and Wellman: *Child Psychology*.
3. Isaacs, S.: *Social Development in Young Children*.
4. Isaacs, S.: *Intellectual Growth in Young Children*.
5. Bridges, K.: *Social and Emotional Development of the Pre-School Child*.
6. Murchison, C.: *Handbook of Child Psychology*.

E. Social Psychology (including Folk Psychology).—

Scope, data, and standpoint of Social Psychology. The concept of group mind. Various types of groups. The Instinctive bases of group life: Herd, Play, Parental, Self-assertion and Submission. The role of Suggestion, Imitation and primitive passive sympathy in Social life.

Primitive Society—General characteristics of totemism.

The Psycho-Analytical account of tribal life. Origin of myths and the nature of superstitions.

The mental life and behaviour of the crowd. The submergence of personality in the crowd. Suggestibility and lack of

responsibility. The Psychology of rumour—Nature of prejudice and the will to believe. The Psychology of persuasion.

Formation of public opinion. The crowd distinguished from an organised group. The nature of collective will. The influence of leaders. The group spirit and sentiment.

The crowd distinguished from an organised group. The nature of collective will. The influence of leaders. The group spirit and sentiment. National mind and character. What is a nation? National character defined. The influence of racial qualities, geographical conditions and vocational pursuits on national character. Mental organisation based on a common tradition and culture the most essential condition of nationhood. Language in Social interaction and communication of culture.

Self-consciousness of nations developed by rivalry and intercourse.

Social Neuroses and Social Hygiene.

Books Recommended for Study

1. McDougall, W. : *Group Mind* (Chapters 2 to 11).
2. Mukherjee and Sen Gupta : *Social Psychology*.
3. Wundt : *Folk Psychology*.
4. Freud, S. : *Group Psychology and the Analysis of the Ego*.

Minor Subject—

1. (a) Elements of Metaphysics

Syllabus same as that prescribed for the B.A. Degree Examination (page 197).

Books for Study

1. Patrick : *Introduction to Philosophy*.
2. Roger : *History of Modern Philosophy*.

(b) Principles of Sociology

Syllabus same as that prescribed for the B.A. Degree course under Principles of Sociology I. General Principles (page 204).

Books for Study

1. Blackmar and Gillin : *Outlines of Sociology*.
2. Giddings : *Principles of Sociology*.

2. Comparative Psychology—Animal and Abnormal

Part A.—Animal Psychology.

Scope, data and methods. Evidence for animal mind. Evolution of behaviour. Instinct and intelligence. Animal learning in relation to incentives. Do animals reason in problem solving situations? Role of Insight. Instinctive and emotional behaviour: Pugnacity, Play, Courtship, Parental, Herd and Migratory propensities. Group life amongst animals and insects.

Part B.—Abnormal Psychology.

Scope, data and methods of abnormal Psychology. The concept of the subconscious mind. The concept normality. Milder deviations from the normal—Fatigue, Drugs and Sleep. Dreams—Principal types and functions. Dream theories of Freud, Jung, Adler and Rivers. Hypnosis and Characteristics of mind in the several stages of Hypnosis. Theories of Hypnosis and suggestion. Nature of functional disorders in general. Conflict. Repression and the complex. Dissociation. Multiple personality. Regression. General theory of Neurosis. Mental Hygiene.

Books Recommended for Study

1. Washburn, M. F.: *The Animal Mind* (Chapters 1 and 2).
2. Lloyd Morgan: *Animal Behaviour* (Chapters 1 and 3).
3. Young: *Motivation of Behaviour* (Chapter 3).
4. Kohler, W.: *Mentality of Apes* (Chapters 2, 4 and 6).
5. Alverdes: *Social Behaviour*.
6. Bernard Hart: *Psychology of Insanity*.
7. McDougall, W.: *Outlines of Abnormal Psychology* (excluding Chapters 13 to 28).
8. Freud, S.: *A General Selection*.

3. Statistic and Scientific Method

Part A.—Statistics.

Introductory.—Why measurements in Psychology? Essentials of valid measurements. The unit of measurement of Psychological processes.

Frequency Distribution.—The concept of "Chance". The properties of the Normal Curve of distribution; graphic representation of frequency distribution.

Measures of Central Tendency and Variability.—The Mode, the Median and the Mean. The Inter-Quartile Range, the Quartile Deviation and the Standard Deviation.

Reliability of Statistical Constants.—Probable error of mean, S. D. and of difference between two means. Limitations of reliability measures.

Psycho-Physical Methods.—Method of Limits, equal appearing intervals. The constant method.

Methods of Estimating.—Rating Scales; Rank order, Paired comparisons.

Correlation.—Graphic representation. Calculation of Spearman's *R*. & Pearson's *r* values, Yule's Coefficient of Association. P. E. of correlation coefficient.

Coefficients of Reliability and of Validity. Correction of a coefficient of correlation for attenuation. Partial and Multiple correlations. Tetrad equation.

Part B.—Scientific Method.

Introductory.—Characteristics of Science. Essentials of the Scientific attitude of mind.

Collection of Data.—Observation and Experiment.

Classification and Definition.—Significance. Nature of Definition. Rules for Definition.

Evolutionary and Comparative Methods.—Meaning, Scope and Value.

Hypotheses and Scientific Inquiry.—Role of Analogy in the suggestion of hypotheses. The formulation of relevant hypotheses. Deductive development of hypotheses. Formal conditions for hypotheses. Reference to facts and crucial experiments.

The Methods of Experimental Inquiry.—Methods of Agreement. Difference, Joint Method, Concomitant variation, and Residues. Value of Experimental Methods.

Probability and Induction.—Securing "fair samples". The Mechanism of sampling. Reasoning from analogy. Nature of probable inference. Calculus of Probability, Interpretations of Probability.

Scientific Explanation.—Description and explanation. Types of explanation. Theory and Law. Uniformity of nature. Limitations of Science.

Books Recommended for Study

1. Garrett, H. E.: *Statistics applied to Psychology and Education.*
2. Guilford, J. P.: *Psycho-Metric Methods.*
3. Thomson, J. A.: *Introduction to Science.*
4. Wolf, A.: *Essentials of Scientific Method.*
5. Cohen and Nagel: *An Introduction to Logic and Scientific Method* (Chapters 3 to 10).
6. Clarke: *The Art of Straight Thinking.*

4. *Mental Heredity and Physiological Psychology*

Part A.—Mental Heredity.

What is evolution? Principal lines of evidence in support of the evolutionary hypothesis.

The chief theories of evolution—Natural Selection. Use and Disuse. The Mutation theory. The evolution of mind—Tropisms. Instincts. Intelligence. What is heredity? Laws of Heredity. Nature and cause of variation. Heredity and environment—their relative importance. Experimental studies of developmental modifications. Are acquired traits inheritable? The inheritance of 'Intelligence' and 'Character'—Studies in genius, mental deficiency and special talents.

Studies of the resemblances and differences between twins.

Part B.—Physiological Psychology.

Relations between Physiology and Psychology. Analysis of Behaviour—Sensory-motor Arcs. The Nervous system—its evolution, structure and functions. The Problem of localisation of cerebral functions—action, speech and thought. Principles of integration of behaviour. Principles of conditioning reflexes—modification of behaviour. The Endocrinal glands. The autonomous nervous system and emotional reactions. Sense perception—Lower senses—Taste, Smell, Cutaneous, Kinaesthetic, etc. Higher senses—Vision, Hearing.

Books Recommended for Study

1. Thomson and Geddes: *Evolution*.
2. Hogben, L.: *Nature and Nurture*.
3. Newman and others: *Twins, a Study of Heredity and Environment*.
4. Dashiell: *Fundamentals of Objective Psychology* (Chapters, 3 to 7).
5. Wheeler: *Science of Psychology* (pages 376 to 500).

(12) *Mathematics*

Group A

Major Subject—

- (1) Pure Mathematics* comprising—

(a) Geometry

1. Pure Geometry: Principle of projection and duality applied to conic sections, reciprocation, homography, involution and inversion.

* Common to B.A. (Hons.) and B.Sc. (Hons.) Degree Examinations.

2. Analytical Geometry of two and three dimensions, mainly equations of the second degree; elementary properties of space curves, Serret-Frenet formulæ.

(b) *Algebra*

1. Elementary theory of algebraic equations, transformations, properties of symmetric functions of roots, solutions of the cubic and the quartic; methods of location and separation of roots and approximation to roots of numerical equations.

2. Solutions of linear equations—determinants and finite quadratic forms.

3. Continued fractions and elements of the theory of integers.

(c) *Analysis*

1. Foundations-elements of the Theory of State of points.

2. Differential and Integral Calculus.

3. Theory of infinite series, product and integrals.

4. Expansions of trigonometric functions and their properties.

5. Cauchy's Theorem and evolution of simple definite integrals by Contour Integration.

6. Elementary Differential Equations.

(2) Applied Mathematics comprising—

1. General Statistics.

2. Probability and Finite Differences.

(3) Mathematical Economics.

Group B

(4) Special Subject—
Actuarial Science.

Or

Any *two* of the following with one paper on each:—

Theory of Functions of a Complex Variable.

Projective and non-Euclidean Geometry.

Differential Equations.

Theory of Functions of a Real Variable.

Theory of Groups.

Theory of Integers.

Integral Equations and Calculus Variations.

Differential Geometry.

Biometrics, Mental and Social Measurements.

Minor Subject—

Economics—same as for the Pass Course.

*Books for Study and Reference**Pure Mathematics**(a) Geometry**Books for Study*

1. Askwith: *Pure Geometry*.
2. Milne: *Projective Geometry*.
3. Durell, C. V.: *Plane Geometry for Advanced Students*, Vol. I.

Books for Reference

1. Durell, C. V.: *Plane Geometry for Advanced Students*, Vol. II.
2. Russell: *Pure Geometry*.
3. Lachlan, J.: *Modern Pure Geometry*.
4. Cremona: *Projective Geometry*.
5. Baker: *Principles of Geometry*, Vol. I.
6. Milne, J. J.: *Cross Ratio Geometry*.
7. Reye: *Geometrie der Lage* (3 vols.).

*(b) Algebra and Theory of Equations**Books for Study*

1. Milne: *Higher Algebra*.
2. Smith, C.: *Algebra*.
3. Chrystal: *Algebra*, Part II.
4. Burnside and Panton: *Theory of Equations*, Vol. I.
5. Burnside and Panton: *Theory of Equations*, Vol. II. Chapters XIII and XIV only.
6. Scott: *Theory of Determinants*.

Books for Reference

1. Niewengloski: *Cours D'Analyse*, Part I.
2. Serret, J. A.: *Cours D'Algebra Superieure*.

*(c) Plane Trigonometry**Books for Study*

1. Loney: *Trigonometry*, Part II.
2. Hobson: *Plane Trigonometry*.

*(d) Co-ordinate Geometry of Two and Three Dimensions.**Books for Study*

1. Smith: *Conic Sections*.
2. Askwith: *Analytical Geometry*.
3. Loney: *Co-ordinate Geometry*, Part II.

4. Sommerville: *Analytical Conics*.
5. Jones, A. C.: *Introduction to Modern Analytical Geometry*.
6. Smith: *Solid Geometry*.
7. Bell, R. J. T.: *Co-ordinate Geometry of Three Dimensions*.

Books for Reference

1. Salmon: *Conic Sections*.
2. Milne: *Homogeneous Co-ordinates*.
3. Whitworth: *Modern Analytical Geometry*.
4. Dr. Beck: *Co-ordinate Geometrie*.
5. *Elementaire Mathematik von Hohern Standpunkte Kleine*.
6. Standt: *Analytische Geometrie*, Vols. I and II.
7. Salmon: *Analytical Geometry of Three Dimensions*, Vol. I.
8. Scott, C. A.: *Modern Analytical Geometry*.
9. Frost: *Solid Geometry*.

(e) *Differential and Integral Calculus including Cauchy's Theories*

Books for Study

1. Edwards, J.: *Treatise on Differential Calculus*.
2. Williamson: *Integral Calculus*.
3. Lamb: *Infinitesimal Calculus*.
4. Gibson: *Calculus*.
5. Goursat: *Mathematical Analysis*, Vol. I.
6. Hardy: *Pure Mathematics*.
7. Townsend: *Complex Variable*.
8. Frost: *Curve Tracing*.
9. Stolz and Geneiner: *Theoretische Arithmetik*.

Books for Reference

1. Edwards: *Integral Calculus*, Vols. I and II.
2. Wilson: *Advanced Calculus*.
3. Bromwich: *Infinite Series*.
4. Snail: *Infinite Processes*.
5. Carslaw: *Fourier's Series and Integrals*, Vol. I.
6. Goursat: *Mathematical Analysis*, Vol. II, Part I.
7. Whittaker and Watson: *Modern Analysis*.
8. Osgood: *Funktion Lehre*.
9. Dela Valli Poussin: *Cours D'Analyse*.
10. Watson: *Complex Integration*.

(f) *Differential Equations*

Books for Study

1. Murray: *Differential Equations*.
2. Piaggio: *Differential Equations*.

Books for Reference

1. Goursat: *Mathematical Analysis*, Vol. II, Part II.
2. Forsyth: *Differential Equations*.
3. Boole: *Differential Equations*.

Applied Mathematics

Statistics, Probability and Finite Differences and
Mathematical Economics.

1. Mill: *Statistical Method*.
2. Rietz: *Hand-book of Mathematical Statistics*.
3. Arne Fisher: *Probability and Frequency Curves*.
4. Yule, U.: *Elements of Statistics*.
5. Cournot: "*Principles des Riches*" Translated by Irving Fisher.
6. *Selected Papers on Mathematical Economics* by Pigou, Edgeworth, Bowley and Irving Fisher.
7. Coolidge: *Probability*.
8. Henry, A.: *Probability and Calculus*.
9. King: *Text-book of the Institute of Actuaries*, Part II.
10. Sprugeon: *Life Contingencies*.
11. Burn and Brown: *Finite Differences*.
12. Whittaker and Robinson: *Calculus of Observations*.

Special Subject

(a) *Theory of Functions of a Complex Variable*

Books for Study

1. Goursat: *Mathematical Analysis*, Vol. II, Part I.
2. Townsend: *Complex Variable*.
3. Mac Robert: *Complex Variable*.
4. Watson: *Complex Integration*.
5. Whittaker and Watson: *Modern Analysis*.
6. Harkness and Morley: *Theory of Functions*.
7. Osgood: *Lehrbuch der Funktionen—Theorie*.

Books for Reference

1. Forsyth: *Theory of Functions*.
2. Pierpont: *Functions of a Complex Variable*.
3. Borel: *Integral Functions*.
4. Lindloff: *Calculus of Residues*.
5. Schlesinger: *Automorphic Functions*.
6. Herwitz-Courant: *Vorlesungen Über Allgemeine Funktion—Theorie*.
7. Landan: *Ergebnisse der neuen Funktion—Theorie*.
8. Valeron: *Lectures on the Theory of Integral Functions*.

(b) (i) *Projective Geometry**Books for Study*

1. Mathews: *Projective Geometry*.
2. Durell, C. V. II: *Pure Geometry for Advanced Students*.
3. Cremona: *Projective Geometry*.
4. Whitehead: *Axioms of Projective Geometry*.
5. Hatton: *Principles of Projective Geometry*.

Books for Reference

1. Veblen and Young: *Projective Geometry*, Vols. I and II.
2. Klein: *Hohere Geometrie*.

(ii) *Non-Euclidean Geometry**Books for Study*

1. Coolidge: *Non-Euclidean Geometry*.
2. Sommerville: *Non-Euclidean Geometry*.
3. Manning: *Geometry of Four Dimensions*.
4. Neville: *Geometry of Four Dimensions*.

Books for Reference

1. Bolyai: *Science of Absolute Space*.
2. Baker: *Principles of Geometry*, I and IV.
3. Ganguly: *Geometry of Hyper-Space*, Vols. I and II.
4. Bonola: *Non-Euclidean Geometry*.
5. Pasch und Dehn: *Neur Geometrie*.

(c) *Differential Equations**Books for Study*

1. Forsyth: *Treatise on Differential Equations*.
2. Goursat: *Mathematical Analysis*, Vol. II, Part II.
3. Ince, E. L.: *Linear Differential Equations*.
4. Schlesinger: *Gleichungen Linear Differential Equations*.

Books for Reference

1. Forsyth: *Theory of Differential Equations*, Part III, Vol. 4.
2. Jordon: *Cours d' Analysis*, Vol. III.
3. Picard: *Traite d' Analysis*, III.
4. Painsleve Schlesinger: *Theory of Differential Equations*.

(d) *Theory of Functions of a Real Variable**Books for Study*

1. Hobson: *Real Variable*, Vols. I and II.
2. Young: *Sets of Points*.

3. Pierpont: *Real Variable*, Vols. I and II.
4. Young (Tract): *Fundamental Theorems in Differential Calculus*.
5. Young (Tract): *Theory of Integration*.

Books for Reference

1. Cantor: *Transfinite Numbers*.
2. Dedikind: *Essays on Theory of Numbers*.
3. Frankel: *Zehn Vorlesungen uher Mengen Lehre*.
4. Caretheodiry: *Vorlesungen uher Real Funktioneri*.
5. Hans Hahn: *Real Funktioneri*.
6. Sieripinski: *Transfinite Numbers*.

(e) *Theory of Numbers*

Books for Study

1. Reid: *Theory of Algebraic Numbers*.
2. Mathews: *Theory of Numbers*.
3. Smith: *Report on the Theory of Numbers*.

Books for Reference

1. Dedikandi: *Essays on the Theory of Numbers*.
2. Landan: *Theorie der Prime Zahlen*, Vols. I and II.
3. Landan: *Vorlensungen uher Zahlen Theories*, Vols. I to III.
4. Bachman: *Zahlen Theorie*, 6 Vols.

(f) *Theory of Integral Equations*

Books for Study

1. Whittaker and Watson: *Modern Analysis* (Chapter on Integral Equations).
2. Maxime Bocher: *Integral Equations*.
3. Lovitt: *Integral Equations*.

Books for Reference

1. Kneser: *Integral Gleichungen*.
2. Hibert-Courant: *Methodender Mathematicche Physik*.
3. Goursat: *Cours D' Analyse*, Vol. III.
4. *Encyclopædia der Mathematicche Wissenschaften* (Article on Integral Equations).

(g) *Differential Geometry*

Books for Study

1. Forsyth: *Differential Geometry*.
2. Eisenhart: *Differential Geometry*.
3. Bagchi: *Geometrical Analysis*.
4. Salmon: *Analytical Geometry of Three Dimensions*, Vols. I and II.

Books for Reference

1. Darboux: *Theory of Surfaces*.
2. Blasche: *Differential Geometry*.
3. Bianchi: *Differential Geometry*.

SCHEME OF EXAMINATION

[Vide Ordinance 218 (c)]

(a) PRELIMINARY EXAMINATION

I. COMPULSORY ENGLISH

				M ^{ax.} Marks
1	English Composition I	..	3 hours	100
2	English Composition II	..	„	100
TOTAL ..				200

II. SECOND LANGUAGE†

Composition and Translation*	..	3 hours	100
<i>Or</i>			
Translation in respect of Classical Language	..	„	100

III. OPTIONAL SUBJECTS

(1) *English*

1	Rhetoric and Principles of Criticism	..	3 hours	150
2	Outlines of English History	..	„	150

	Max. Marks
*Composition	75
Translation from English to the Second Language	25
TOTAL ..	100

† The following is the scheme of examination in French and Latin :—

French

Prescribed Texts, Grammar and Translation from English into French and from French into English	..	3 hours	100
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Note.—Passages for translation from French into English shall be chosen from the prescribed texts.

Latin

Prescribed Texts, Grammar, Translation from English into Latin	..	3 hours	100
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Max.
Marks3 and 4 *One of the following:—*

(i) Kannada Literature	} 2 papers of 3 hrs. each carrying 150 marks	} 300
(ii) Urdu Literature		
(iii) Sanskrit Literature		
(iv) Persian Literature		
(v) Politics comprising—		
(a) English Political Thought in a prescribed period	}	}
(b) Select text-books with reference to the above period		

TOTAL .. 600

(2) *Kannada*

1 and 2 Tamil or Telugu— ..		
(i) Text-books and Grammar ..	3 hours	150
(ii) Translation	"	150
3 Cultural and Historical Studies relating to Karnataka, Paper I	"	150
4 Cultural and Historical Studies relating to Karnataka, Paper II	"	150
TOTAL ..		600

(3) *Sanskrit*

1 Classical Prose and Poetry	3 hours	150
2 Drama and Poetics	"	150
3 Grammar and History of Classical Lit- erature and Criticism	"	150
TOTAL ..		450

(4) *Persian*

1 Classical Prose and Poetry	3 hours	150
2 History of Literature and Language ..	"	150
3 Translation	"	150
4 Drama and Fiction	"	150
TOTAL ..		600

(5) *Avestan and Pahlavi*Max.
Marks.

1	Prose and Poetry	3 hours	150*
2	History of Literature	"	150*
3	Translation	"	150*
4	Grammar	"	150
TOTAL ..			600

(6) *Arabic*

1	Poetry and Prose	3 hours	150*
2	History of Literature	"	150*
3	Translation	"	150*
4	Modern Prose and Poetry	"	150
TOTAL ..			600

(7) *Urdu*

Scheme of Examination is under consideration.

(8) *History*

1	Archæology	3 hours	150
2	History of Civilization	"	150
3	Recent Economic History of India	"	150
4	Public Administration	"	150
TOTAL ..			600

(9) *Politics*

1	Constitutional History of England ..	3 hours	150
2	Jurisprudence	"	150
3	Sociology	"	150
4	Recent Economic History of India ..	"	150
TOTAL ..			600

(10) *Economics*

A 1	Recent Economic History of India ..	3 hours	150
2	Elements of Statistics	"	150
3	History of India to 1300 A.D.	"	150
4	History of India after 1300 A.D. ..	"	150
TOTAL ..			600

				Max. Marks
B 1	Recent Economic History of India	..	3 hours	150
2	Elements of Statistics	..	..	150
3	Principles of Sociology I	..	..	150
4	Principles of Sociology II	..	..	150
TOTAL ..				600
C 1	Recent Economic History of India	..	3 hours	150
2	Pure Mathematics I	..	..	150
3	Pure Mathematics II	..	..	150
4	Applied Mathematics—General Statistics, etc.	..	..	150
TOTAL ..				600

(11) *Philosophy*(a) *Metaphysics Branch*

1	General Psychology	3 hours	150
2	Ethics	..	..	..	150
3	Logic	..	..	..	150
4	Plato's Republic	..	..	..	150
TOTAL ..					600

(b) *Social Philosophy Branch*

A 1	Anthropology	..	..	3 hours	150
2	Comparative Politics	..	..	..	150
3	General Economics (Paper 1 of Economics at the B.A. Pass)	..	..	..	150
4	Social Psychology	..	..	..	150
TOTAL ..					600
B 1	General Psychology	..	..	3 hours	150
2	Metaphysics	..	..	..	150
3	Indian Philosophy	..	..	..	150
4	Anthropology or Social Psychology	..	..	..	150
TOTAL ..					600

(c) Psychology Branch

Max.
Marks

1	Elements of Metaphysics or Principles of Sociology	3 hours	150
2	Comparative Psychology: Animal and Abnormal	"	150
3	Statistics and Scientific Method	"	150
4	Mental Heredity and Physiological Psychology	"	150
TOTAL ..			600

(12) Mathematics

1	General Economics I	3 hours	150
2	General Economics II	"	150
3	Elements of Statistics or Recent Economic History of India	"	150
TOTAL ..			450

Note.—In the case of all examinations in optional Arts Subjects, a statement of class examination marks in the subject concerned shall be furnished to the Chairman of the Board of Examiners and by him to the University, these marks being used solely for the decision of cases on the border line between passing and failing or between two classes.

(b) FINAL EXAMINATION

(1) English

1	Chaucer and History of English Language	3 hours	100
2	History of English Literature	"	100
3	Elizabethan Drama	"	100
4	Elizabethan Prose and Poetry	"	100
5	Post-Elizabethan Literature I	"	100
6	Post-Elizabethan Literature II	"	100
7	Post-Elizabethan Literature III	"	100
8	Comparative Drama	"	100
TOTAL ..			800

(2) Kannada

1	Jaina Literature	3 hours	100
2	Veerasaiva Literature	"	100
3	Brahmana Literature	"	100
4	Poetics and Prosody	"	100
5	Old Kannada Grammar and History of Language	"	100
6	History of Literature	"	100

			Max. Marks
7	Sanskrit Language and Literature I ..	3 hours	100
8	Sanskrit Language and Literature II ..	„	100
TOTAL ..			800

(3) *Sanskrit*

1	Poetry and Prose I ..	3 hours	100
2	Poetry and Prose II ..	„	100
3	Darsana I ..	„	100
4	Darsana II ..	„	100
5	Poetics ..	„	100
6	Grammar and Elements of Comparative Philology ..	„	100
7	History of Sanskrit Literature and Criti- cism ..	„	100
8	Translation ..	„	100
9	Composition ..	„	100
TOTAL ..			900

(4) *Persian*

1	Modern Prose and Poetry ..	3 hours	100
2	Indo-Iranian Philology ..	„	100
3	Political History of Persia ..	„	100
4	Outline of Islamic Philosophy ..	„	100
5	Sufism ..	„	100
6	Elements of Avestan Literature or History of Islamic Sects ..	„	100
7	Elements of Arabic Literature ..	„	100
8	Essay ..	„	100
TOTAL ..			800

(5) *Avestan and Pahlavi*

1	Pre-Islamic Religion and Philosophy of Iran ..	3 hours	100
2	Pahlavi Literature ..	„	100
3	Pahlavi Translation ..	„	100
4	Pazend and Early Classical Persian ..	„	100
5	Elements of Vedic Literature ..	„	100
6	Elements of Vedic Literature Translation ..	„	100
7	Political History of Pre-Islamic Period ..	„	100
8	Outline of Greek Philosophy ..	„	100
TOTAL ..			800

(6) <i>Arabic</i>						Max. Marks
1	Advanced Grammar	..	..	3 hours		100
2	Comparative Study of Semetic Philo- logy	..	..	..	..	100
3	Rhetoric and Prosody	..	..	..	..	100
4	Outline of Islamic Philosophy	..	..	..	..	100
5	History of Islamic Civilization	..	..	..	..	100
6	History of the Development of Islamic Sects	..	..	..	..	100
7	Neo-Platonic Philosophy	..	..	..	..	100
8	Essay	..	..	..	..	100
TOTAL ..						800

(7) *Urdu*

Scheme of Examination is under consideration.

(8) *History*

1	History of India up to 1300 A.D.	..	..	3 hours		100
2	History of India from 1300 A.D.	..	..	..	..	100
3	History of Europe from 1789 A.D.	..	..	..	..	100
4	British Constitutional History	..	..	..	..	100
5	A Special Subject	..	..	..	..	100
6	Economics	..	..	..	..	100
7	Politics	..	..	..	..	100
8	Essay	..	..	..	..	100
TOTAL ..						800

(9) *Politics*

1	History of Political Thought	..	..	3 hours		100
2	Political Theory	..	..	..	..	100
3	Political Organization	..	..	..	..	100
4	Public Administration	..	..	..	..	100
5	Economics	..	..	..	..	100
6	Public Finance	..	..	..	..	100
7	Indian Political Institutions	..	..	..	..	100
8	Essay	..	..	..	..	100
TOTAL ..						800

(10) <i>Economics</i>						Max. Marks
1	Economic Principles	..	..	3 hours		100
2	Money	..	..	..	..	100
3	Structure and Problems of Modern Industry	..	..	..	..	100
4	Public Finance	..	..	..	..	100
5	Economic History	..	..	..	..	100
6	Politics	..	..	..	..	100
7	A Special Subject	..	..	..	..	100
8	Essay	..	..	..	..	100
TOTAL ..						800

(11) *Philosophy*(a) *Metaphysics Branch*

1	History of European Philosophy, Ancient and Mediæval	3 hours		100
2	History of Modern European Philosophy	..	..	..	..	100
3	Metaphysics with special reference to Contemporary Philosophy	..	..	..	..	100
4	Theory of Knowledge	..	..	..	..	100
5	History of Indian Philosophy (exclusive of Vedānta)	..	..	..	..	100
6	Vedānta (Advaita, Viśiṣṭadvaita, Dvaita)	..	..	..	..	100
7	Philosophy of Religion (with special reference to India)	..	..	..	..	100
8	Essay	..	..	..	..	100
TOTAL ..						800

(b) *Social Philosophy Branch*

1	Ethics	..	..	3 hours		100
2	Political Philosophy	..	..	..	..	100
3	History of Ethics and History of Political Philosophy	..	..	..	..	100
4	Indian Ethics and Indian Political Thought	..	..	..	..	100
5	Sociology I (Principles of Sociology)	..	..	..	..	100
6	Sociology II (Indian Social Institutions)	..	..	..	..	100
7	Philosophy of Religion (with special reference to India)	..	..	..	..	100
8	Essay	..	..	..	..	100
TOTAL ..						800

(c) Psychology Branch

(c) Psychology Branch				Max. Marks
1	General Psychology	..	3 hours	100
2	Systems of Psychology	..	..	100
3	Experimental Psychology, Theory I	..	..	100
4	Experimental Psychology, Theory II	..	..	100
5	Experimental Psychology, Practical	..	..	100
6	Essay	..	..	100
7	Any two of the following to be pre- scribed from time to time—			
	(a) Mental Measurement	..	} Two papers of three hours each carrying 100 marks	200
	(b) Psychology of Industry	..		
	(c) Psychology of Religion	..		
	(d) Child Psychology	..		
	(e) Social Psychology (including Folk Psychology)	..		
TOTAL				800

(12) Mathematics

Group A

1	Pure Mathematics I	..	3 hours	100
2	Pure Mathematics II	..	..	100
3	Pure Mathematics III	..	..	100
4	Pure Mathematics IV	..	..	100
5	Applied Mathematics I	..	..	100
6	Applied Mathematics II	..	..	100
7	Mathematical Economics	..	..	100
TOTAL ..				700

Group B

Actuarial Science I	..	..	3 hours	100
Actuarial Science II	..	..	..	100
TOTAL ..				200

Or

Special Subject I	..	..	3 hours	100
Special Subject II	..	..	..	100
TOTAL ..				200

Class Work	..	..		100
Class Examinations	..	..		100

GRAND TOTAL .. 1,100

Note.—In the case of examinations in optional Arts Subjects other than Mathematics, a statement of class examination marks in the subjects concerned shall be furnished to the Chairman of the Board of Examiners and by him to the University, these marks being used solely for the decision of cases on the border line between passing and failing or between two classes.

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide* Ordinances 83 to 87]

B.Sc. Degree Examination

CONDITIONS OF ADMISSION*

[*Vide* Ordinance 10]

COURSES OF STUDY (GENERAL)

[*Vide* Ordinances 71 to 73]

COURSES OF STUDY (DETAILED)

[*Vide* Ordinance 217 (c)]

I. COMPULSORY ENGLISH

The same text-books shall be set for the two compulsory Composition papers both in the B.A. and B.Sc.

II. SECOND LANGUAGE

(1) *Kannada*

Text-books in Modern Kannada to be prescribed.

(2) *Telugu*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(3) *Tamil*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(4) *Urdu*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(5) *Sanskrit*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

* No one is allowed to enter for the B.Sc. Degree examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

(6) *Persian*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(7) *Arabic*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(8) *French*

Same as for the B.A. Degree Examination.

(9) *Latin*

Same as for the B.A. Degree Examination.

III. OPTIONAL SUBJECTS

(1) *Economics and Statistics*

With regard to Group (xi), the detailed course shall be as under:—

(i) The course of study in Economics, Mathematics and Sociology shall be the same as for the B.A. Degree.

(ii) The course of study in Mathematical Statistics and Mathematical Economics shall consist of—

(a) Mathematical Statistics,

(b) Mathematical Economics,

(c) Mathematics or Social Measurements,

the latter subject being offered by candidates who take Mathematics instead of Sociology.

(2) *Psychology*

The course of study in Group (x) shall be as follows:—

(i) *Experimental Psychology*—

(1) Experimental Psychology of Attention, Perception, Imagery, Association, etc. (Theory).

(2) Experimental Psychology of Reasoning, Impulses, Emotions, Will, Hypnosis, etc. (Theory).

(3) Experimental Psychology (Practical).

Note.—The Practical examination in Experimental Psychology shall include the valuation of class records of laboratory work. The practical examination shall, in addition, include a *viva voce*.

(ii) *Child Psychology and Educational Psychology*—

(1) General Psychology.

(2) Child Psychology.

(3) Educational Psychology.

(iii) *Mathematical Statistics*—

- (1) Theory of Measurements and Statistical Methods.
- (2) and (3) Pure Mathematics.

Books for Study

(i) General Psychology

1. McDougall: *Outlines of Psychology* (except Chapters 2, 3 and 4).
2. Spearman: *Nature of Intelligence* (Chapters 4, 5, 7, 9, 12, 13, 16, 19 and 20).

(ii) Experimental Psychology

1. Seashore: *Elementary Experiments in Psychology*.
2. Collins and Drever: *Experimental Psychology*.
3. Foster: *Experiments in Psychology*.

(iii) Child Psychology

1. Waddle, C. W.: *Introduction to Child Psychology*.
2. Gessel: *Psychology of the Pre-School Child*.
3. Stern: *Psychology of the Early Childhood*.
4. Miller: *The New Psychology and the Parent*.

(iv) Educational Psychology

1. Charles Fox: *Educational Psychology*.
2. James Ward: *Psychology Applied to Education*.
3. Sandiford: *Educational Psychology*.

(3) *Sociology*

Same as for the B.A. Degree Examination.

(4) *Mathematics*

Same as for the B.A. Degree Examination.

(5) *Geography**Course of Study*—

- | | | |
|--------------------------------------|---|--|
| 1. Climatology and Oceanography | } | 1 and 2 will be treated with special reference to a selected part or parts of the world. |
| 2. Geomorphology | | |
| 3. (a) Human and Political Geography | } | As for B.A. |
| Or
(b) Economic Geography. | | |
| 4. Cartography and Surveying. | | |
| 5. Practical Work. | | |

(6) *Physics*

Same as for the B.A. Degree Examination.

(7) *Chemistry*

Same as for the B.A. Degree Examination.

(8) *Geology*

Physiography and Cosmical Aspects of Geology.—Various hypotheses as to the origin of the earth. Probable condition of the earth's interior. Methods of determination of the shape, size and density of the earth. Age of the earth. Evolution of surface features such as mountains, valleys, plains, etc. Isostasy.

Crystallography.—Study of the various types of holohedral crystal forms found in the several systems. Methods of crystal notation according to Weiss, Naumann and Miller. Hemihedral and hemimorphic crystal forms and combinations under each of the crystal systems. The more important types of twins and twinning. Use of the Contact Goniometer. Drawing of the more important types of holohedrons, hemihedrons and twins.

Mineralogy.—The chief characteristics of all the more abundant and more important rock-forming minerals and ores. Their modes of occurrence, alteration, products and uses with special reference to examples of isomorphism. Paramorphism, Pseudomorphism and Dimorphism. The practical determination of the chief physical and chemical properties of the common ores and minerals, including the use of the blow-pipe.

Petrology.—A detailed study of the origin and classification of the important types of rocks, their composition, texture, structure and mode of occurrence. Contact and regional metamorphism. The macroscopic and microscopic examination of rocks including the determination of the simple optical characters of the chief rock-forming minerals in parallel polarised light. Drawing of sketches to represent features observed in rock sections under the microscope. Construction and use of a simple petrological microscope.

Structural and Field Geology.—The origin of the more important lithological and structural features of rocks and their field relationships. Illustration by diagrammatic sketches. Origin and nature of mineral veins. Construction and interpretation of geological maps and sections. Tracing of outcrops. Simple problems in structural geology. Laboratory exercises in reading topographical and geological maps.

Note.—The above to be substantiated by actual observations in the field during the geological excursions to parts in and outside Mysore for nearly a month.

Stratigraphy and Palæontology.—Principles of correlation of strata. Homotaxis. Causes for the imperfection of the geological record. The chief lithological and palæontological characters of the various geological systems and their chief sub-divisions

with special reference to their Indian representatives. Probable physical conditions under which they were formed. A detailed study of the geological history of Mysore.

The classification, characters and distribution of the more important types of fossils, especially Indian. Drawing, description and identification of fossils. The study of fossils in relation to the problem of evolution.

The knowledge of the candidate in accordance with the syllabus will be tested also by practical examinations. *Viva voce* questions may be asked.

(8) *Zoology*

Same as for the B.A. Degree Examination.

(9) *Botany*

Same as for the B.A. Degree Examination.

SCHEME OF EXAMINATION

[*Vide* Ordinance 128 (b)]

I. COMPULSORY ENGLISH

				Max. Marks
1	English Composition I	..	3 hours	100
2	English Composition II	..	..	100
			TOTAL ..	200

II. SECOND LANGUAGE†

Composition and Translation* .. 3 hours 100

Or

Translation in respect of Classical Language 100

	Max. Marks
*Composition	75
Translation from English to the Second Language	25
TOTAL ..	100

† The following is the scheme of examination in French and Latin :—

French

Prescribed Texts, Grammar and Translation from English into French and from French into English .. 3 hours 100

Note.—Passages for translation from French into English shall be chosen from the prescribed texts.

Latin

Prescribed Texts, Grammar, Translation from English into Latin .. 3 hours 100

III. OPTIONAL SUBJECTS

(1) *Economics and Statistics*

(a) Economics

1	General Economics I	..	..	3 hours	150
2	General Economics II	..	..	"	150
3	Elements of Statistics	}	..	"	150
	<i>Or</i> Recent Economic History of India				
4	Class Examinations	..	..		50
TOTAL ..					500

(b) Mathematical Statistics and Economics

1	Mathematical Statistics	..	..	3 hours	125
2	Mathematical Economics	..	..	"	125
3	Mathematics	}	..	"	150
	<i>Or</i> Social Measurements				
4	Class Records	..	..		50
5	Class Examinations	..	..		50
TOTAL ..					500

(c) Mathematics

1	Pure Mathematics I	..	..	3 hours	125
2	Pure Mathematics II	..	..	"	125
3	Applied Mathematics— <i>Either</i> Dynamics, Statistics and Astro- nomy	}	..	"	150
	<i>Or</i> General Statistics and Application of Mathematics to Economics and Mental and Social Measurements				
4	Class Records	..	..		50
5	Class Examinations	..	..		50
TOTAL ..					500

(d) Sociology

				Max. Marks
1	Principles of Sociology I	..	3 hours	150
2	Principles of Sociology II	..	..	150
3	Anthropology	..	..	150
4	Class Examinations	..	..	50
TOTAL				500

*(2) Psychology**(a) Experimental Psychology*

1	Experimental Psychology of Attention, Perception, etc. (Theory)	..	3 hours	150
2	Experimental Psychology of Reasoning, Impulses, etc. (Theory)	..	..	150
3	Experimental Psychology (Practical)	..	..	100
4	Class Records	..	..	50
5	Class Examinations	..	..	50
TOTAL ..				500

(b) Child Psychology and Educational Psychology

1	General Psychology	..	3 hours	150
2	Child Psychology	..	..	150
3	Educational Psychology	..	..	150
4	Class Examinations	..	..	50
TOTAL ..				500

(c) Mathematical Statistics

1	Theory of Measurements and Statistical Methods	..	3 hours	150
2	Pure Mathematics I	..	..	125
3	Pure Mathematics II	..	..	125
4	Class Records	..	..	50
5	Class Examinations	..	..	50
TOTAL ..				500

(3) Sociology

1	Principles of Sociology I	..	3 hours	150
2	Principles of Sociology II	..	..	150
3	Anthropology	..	..	150
4	Class Examinations	..	..	50
TOTAL ..				500

					Max. Marks
(4) <i>Mathematics</i>					
1	Pure Mathematics I	..	..	3 hours	125
2	Pure Mathematics II	..	..	..	125
3	Applied Mathematics— Dynamics, Statics and Astronomy			}	150
	Or General Statistics and Application of Mathematics to Economics and Mental and Social Measurements				
4	Class Records	..	..		50
5	Class Examinations	..	..		50
TOTAL ..					500

(5) <i>Geography</i>					
1	Climatology, Oceanography and Geo- morphology	..	..	3 hours	150
2	Human and Political Geography or Eco- nomic Geography	..	..	..	150
3	Practical Work	..	..	..	100
4	Class Records	..	..	..	50
5	Class Examinations	..	..	..	50
TOTAL ..					500

(6) <i>Physics</i>					
1	Physics I	..	..	3 hours	150
2	Physics II	..	..	..	150
3	Practical Physics	..	..	..	100
4	Class Records	..	..	..	50
5	Class Examinations	..	..	..	50
TOTAL ..					500

(7) <i>Chemistry</i>					
1	Chemistry I	..	..	3 hours	150
2	Chemistry II	..	..	..	150
3	Practical Chemistry	..	..	..	100
4	Class Records	..	..	..	50
5	Class Examinations	..	..	..	50
TOTAL ..					500

(8) <i>Geology</i>					Max. Marks
1	Geology I	..	..	.. 3 hours	150
2	Geology II	..	..	.. "	150
3	Practical Geology	..	..	.. "	100
4	Class Records	..	..	..	50
5	Class Examinations	..	..	..	50
TOTAL ..					500

(9) <i>Zoology</i>					
1	Zoology I	..	..	.. 3 hours	150
2	Zoology II	..	..	.. "	150
3	Practical Zoology	..	..	.. "	100
4	Class Records	..	..	..	50
5	Class Examinations	..	..	..	50
TOTAL ..					500

(10) <i>Botany</i>					
1	Botany I	..	..	.. 3 hours	150
2	Botany II	..	..	.. "	150
3	Practical Botany	..	..	.. "	100
4	Class Records	..	..	..	50
5	Class Examinations	..	..	..	50
TOTAL ..					500

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide* Ordinances 74-76]

B.Sc. (Hons.) Degree Examination

CONDITIONS OF ADMISSION*

[*Vide* Ordinance 10]

COURSES OF STUDY (GENERAL)

[*Vide* Ordinances 80 and 82]

* No one is allowed to enter for the B.Sc. (Hons.) Degree Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

COURSES OF STUDY (DETAILED)

[Vide Ordinance 217 (c)]

I. COMPULSORY ENGLISH

Text-books shall be the same as those prescribed for Paper I for the B.A. Degree Examination.

II. SECOND LANGUAGE

(1) *Kannada*

Text-books in Modern Kannada to be prescribed.

(2) *Telugu*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(3) *Tamil*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(4) *Urdu*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(5) *Sanskrit*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(6) *Persian*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(7) *Arabic*

Text-books shall be the same as those prescribed for the B.A. Degree Examination.

(8) *French*

Same as for the B.A. Degree Examination.

(9) *Latin*

Same as for the B.A. Degree Examination.

III. OPTIONAL SUBJECTS

(1) *Mathematics*

Major Subject—

Group A

(1) *Pure Mathematics—*

Same as for the B.A. (Hons.) Degree Examination.

(2) Applied Mathematics comprising—

(a) Statics.

(b) Dynamics—Practical Dynamics; Rigid Dynamics excluding treatment by Lagrangian equations and moving co-ordinates.

(c) Astronomy—Elements of Spherical Trigonometry; Refraction, planetary motion, parallax, aberration; Precession and Nutation; Transit instrument and its errors.

(3) Introduction to Mathematical Physics—

Methods of Mathematical Physics—Vector analysis, theory of vector fields, moving co-ordinates, Hamilton's principle and principle of least action, elements of the theory of cylindrical and spherical harmonics; Green's and Stoke's theorems and applications to the theory of scalar and vector potential; elements of electro-statics and electro-dynamics; vibrations and strings on circular membranes.

Group B

(4) Special Subjects—

Any *two* of the subjects under Groups A and B, provided *one* of them at least is from Group A.

Group A

Theory of Functions of a Complex Variable.

Projective and Non-Euclidean Geometry.

Theory of Functions of a Real Variable.

Theory of Groups.

Integral Equations and Calculus of Variations.

Differential Geometry.

Differential Equations.

Theory of Integers.

General Statistics.

Probability and Finite Differences.

Group B

Astronomy.

Electro-magnetic Theory.

Theory of Relativity.

Quantum Mechanics (of the atom).

Advanced Dynamics.

Hydro-mechanics.

Statistical Mechanics.

Theory of Elasticity

Minor Subject—

Physics—Same as for the Pass Course.

*Books for Study and Reference**Major Subject—*

Pure Mathematics

Same as those prescribed for the B.A. (Hons.) Degree Examination.

Applied Mathematics

(a) *Statics**Books for Study*

1. Loney: *Statics*.
2. Minchin: *Statics*, Vols. I and II.

Books for Reference

1. Routh: *Statics*, Vol. I.
2. Cremona: *Graphic Statics*.

(b) *Dynamics of a Particle and of a Rigid Body**Books for Study*

1. Loney: *Dynamics of a Particle and a Rigid Body*.
2. Lamb: *Dynamics*.
3. Besant and Ramsey: *Dynamics*.

Books for Reference

1. Routh: *Particle Dynamics*.
2. Routh: *Elementary Rigid Dynamics*.
3. Lamb: *Higher Mechanics*.
4. Webster: *Dynamics of Particles, Rigid Bodies and of Fluids*.

(c) *Astronomy**Books for Study*

1. Godfrey: *Astronomy*.
2. Bryan and Barlow: *Astronomy*.
3. Ball: *Spherical Astronomy*.
4. Young: *General Astronomy*.

Books for Reference

1. Jones: *General Astronomy*.
2. Chauvenet: *Astronomy*, Vols. I and II.
3. Newcomb: *Astronomy*.

Introduction to Mathematical Physics.

Books for Study

1. Houstons: *Introduction to Mathematical Physics*.
2. Hass: *Theoretical Physics*, Vols. I and II.
3. Byerly: *Fourier's Series and Spherical Harmonics*.

Books for Reference

1. Mac Robert: *Spherical Harmonics*.
2. Weatherburn: *Vector Analysis*, Vols. I and II.
3. Hibbert and Courant: *Methods of Mathematical Physics*.
4. Weber Reimann: *Partial Differential Equations of Mathematical Physics*.

*Special Subjects**(a) Theory of Functions of a Complex Variable.*

Same as those prescribed for the B.A. (Hons.) Degree Examination.

(b) Projective and Non-Euclidean Geometry.

Same as those prescribed for the B.A. (Hons.) Degree Examination.

(c) Differential Equations.

Same as those prescribed for the B.A. (Hons.) Degree Examination.

(d) Theory of Numbers.

Same as those prescribed for the B.A. (Hons.) Degree Examination.

(e) Integral Equations and Calculus of Variations.

Same as those prescribed for the B.A. (Hons.) Degree Examination.

(f) Differential Geometry.

Same as those prescribed for the B.A. (Hons.) Degree Examination.

(g) Astronomy.

Same as those prescribed for Applied Mathematics.

*(h) Electro-Magnetic Theory.**Books for Study and Reference*

1. Pidduk: *Electricity and Magnetism*.
2. Jeans: *Electricity and Magnetism*.
3. Maxwell: *Electricity and Magnetism*.
4. E. Block: *Precis de Electricite*.
5. Webster: *Electricity and Magnetism*.
6. Hass: *Theoretical Physics*, Vol. I.
7. Pierce: *Newtonian Potential Function*.

(i) Advanced Dynamics

Books for Study

1. Whittaker: *Analytical Dynamics*.
2. Routh: *Advanced Rigid Dynamics*.
3. Lamb: *Higher Mechanics*.
4. Webster: *Dynamics*.
5. Appell and Deutherille: *Precis de Mecanique*.

Books for Reference

1. Klein and Sommerfeld: *Theorie der Kriesels*.
2. Appell: *Mecanique Rationnelle*, 4 Vols.

(j) Hydro-Mechanics

Books for Study

1. Ramsay and Besant: *Hydro-Mechanics*, Vols. I and II.
2. Lamb: *Hydro-Dynamics*.

Book for Reference

Lavicevita: *Vortrage ans der Gebiete der Hydro und Aerodynamik* by Karmaul.

(k) Theory of Elasticity

Books for Study

1. Love: *Theory of Elasticity*.
2. Todhunter and Pearson: *History of Theory of Elasticity*.

(2) Physics

Major Subject—

Group A

- (1) Properties of Matter and Sound.
- (2) Heat and Thermo-Dynamics.
- (3) Light.
- (4) Electricity and Magnetism
- (5) Mathematical Physics.
- (6) Chemical Physics.

Group B

- (7) Practical Physics.
- (8) Practical Chemical Physics.

Minor Subject—

Mathematics as in the Pass Course.

The following is the detailed course of study in Chemical Physics:—

Theory

The gaseous state: densities of gases and vapours, vapour pressure, molecular weight, dissociation.

The liquid state: solution, osmotic pressure, electrolytic dissociation, molecular association in liquids, liquid mixtures.

Surface phenomena: adsorption, surface tension, orientation of molecules at surfaces.

The colloidal state: sols, gels and emulsions.

The solid state: amorphous solids and crystals; crystal symmetries, space lattices, simple types of crystal structure and their chemical significance. X-rays and crystals.

Evidence of molecular reality; number, weight and size of molecules. Molecular form, elements of stereo-chemistry, structure of simple carbon compounds.

Nature of the chemical bond; valency and its electronic interpretation, polar and non-polar linkages.

Dielectric constant, temperature effect, Debye equation, dipole moment. Molecular association. Molecular refraction and dispersion.

Light scattering: Raman effect. Infra-red spectra. Simple band spectra, heat of dissociation. Photo-chemical action.

Optical activity, Faraday effect, verdet constant. Molecular magnetism and its chemical significance.

Homogeneous reactions. Affinity. Homogeneous and Heterogeneous equilibria.

Electrolytic conduction, ionic equilibria. Strong electrolytes. E.M.F. of cells.

Practical

Simple qualitative analysis.

Purification of substances by physical processes.

Testing purity of samples.

Simple volumetric analysis.

Conductometric and potentiometric titration.

Simple gravimetric analysis.

Densities of gases and of vapours.

Determination of molecular weight of substances in solution by the freezing and the boiling point methods.

Osmotic pressure.

Partition coefficient.

Vapour pressures of liquids.

Critical points of liquids and liquid mixtures.

Preparation of colloidal solutions and study of their properties.

- Refractivity, dispersion and their temperature variation.
- Optical rotation, Faraday effect and Verdet constant.
- Conductivity of electrolytes, transport numbers, ionic velocities, electro-chemical equivalents, E.M.F. of concentration cells.
- Measurement of dielectric constants.
- Measurement of magnetic susceptibilities.
- Measurement of Raman frequencies.
- Analysis of simple crystals by X-rays.
- Heats of combustion and of neutralisation.
- Velocity of chemical reactions—Catalysis.
- Strength of acids and bases.
- Adsorption.

(3) *Chemistry*

Major Subject—

Group A

- (1) Inorganic.
(2) Physical.
(3) Organic.
(4) (a) Plant Chemistry I*
Or
(b) Colloid Chemistry I.
(5) (a) Plant Chemistry II.
Or
(b) Colloid Chemistry II—Practical.

Group B

- (6) Practical Chemistry I Inorganic.
(7) Practical Chemistry II Physical.
(8) Practical Chemistry III Organic.

Minor Subject—

Physics as in the Pass Course.

The courses of study in Chemistry shall consist of a comprehensive treatment of the following divisions of the subject:—

- (1) Inorganic Chemistry.
- (2) Physical Chemistry.
- (3) Chemistry of carbon compounds.

The laboratory course shall include qualitative analysis of minerals and mixtures of inorganic substances; volumetric and gravimetric analysis; the determination of carbon, hydrogen, nitrogen and chlorine in organic compounds; inorganic and organic preparations; and the more important physico-chemical measurements.

The course shall include visits to chemical factories involving large-scale operations.

* Common to Botany and Chemistry.

Book for Study

Karrer: *Text-book of Organic Chemistry* (Nordemann Publishing Co.)

Books for Reference

Lowry: *Inorganic Chemistry*.

Ephraim: *Inorganic Chemistry*.

Newton Friend: *Text-book of Inorganic Chemistry*.

Martin: *Industrial Chemistry*.

Evans: *Metals and Metallic Compounds*.

Glasstone: *Recent Advances in General Chemistry*.

Kolthoff and Sandell: *Text-book of Quantitative Inorganic Analysis*.

Riesenfeld and Ray: *Manual of Practical Inorganic Chemistry*.

MacDougal: *Physical Chemistry*.

Taylor: *Treatise on Physical Chemistry*.

Spencer: *Experimental Course of Physical Chemistry*.

Schmidt and Rule: *Organic Chemistry*.

Glasstone: *Recent Advances in Physical Chemistry*.

Sudborough: *Berthsen's Text-book of Organic Chemistry*.

Kamm: *Organic Qualitative Analysis*.

Gattermann and Wieland: *Practical Methods of Organic Chemistry*.

Clark: *Handbook of Organic Analysis*.

Day and Raman: *Laboratory Manual of Organic Chemistry*.

Stewart: *Recent Advances in Organic Chemistry*.

Colloid Chemistry

Holmes: *Laboratory Manual of Colloid Chemistry*.

Thomas: *Colloid Chemistry*.

Freundlich: *Colloid and Capillary Chemistry*.

Bancroft: *Applied Colloid Chemistry*.

Colloid Symposium Annual.

Plant Chemistry

Harvey: *Plant Physiological Chemistry*.

Onslow: *Principles of Plant Bio-Chemistry*.

Onslow: *Practical Plant Bio-Chemistry*.

*(4) Geology**Major Subject—**Group A*

- (1) General and Structural Geology.
- (2) Crystallography and Mineralogy.
- (3) Petrology.
- (4) Stratigraphy and Indian Geology.
- (5) Palæontology.

Group B

- (6) Practical Geology.

Minor Subject—

Zoology or Botany or Chemistry as in the Pass Course.

The following is the detailed course of study in Geology:—

In addition to a fuller and more detailed study of the subjects mentioned in the syllabus for the B.Sc. Degree, the following subjects shall be studied :

Physiography and Cosmical Aspects of Geology.—Discussion of the relative merits of the various hypotheses relating to the origin of the earth. Theory of isostasy. Wegener's hypothesis. Evolution of climate. Glacial epochs and their origin.

Crystallography.—The thirty-two types of crystal symmetry. Theories of crystal structure. Zonal characters, crystal projections and drawings. General mathematical relations of crystals and measurement of crystal angles. Use of the Reflecting Goniometer.

Mineralogy.—Study of the chief rock-forming minerals and ores with special reference to their genesis, economic value, and mode of occurrence. Descriptions and determination of minerals by chemical and physical tests. A course of lectures and practical work in Mineral Chemistry.

Petrology.—The study and discussion of the principles underlying the genesis of rocks. Recent methods in petrological classification. Mechanical separation of rock constituents. Examination of sands. Methods of the preparation of rock sections for the microscope. Optical properties of crystals. Practical determination of the optical characters of the chief rock-forming minerals with the petrological microscope, including the use of the convergent light. Determination of the nature and history of the rocks by means of the microscope.

Economic Geology.—Relation of Geology to industry, commerce and political economy. A study of the principles governing the formation of various types of mineral deposits. Occurrence and distribution of mineral deposits with special reference to India. Their relation to the structure of the enclosing rock masses. Their deformation, superficial alteration and enrichment. Methods of determination of the probable extent and value of the workable deposits. Prospecting, sampling and ore valuation in Mysore.

Building materials. Ornamental and decorative stones. Natural abrasives. Mineral points, Refractory materials and other miscellaneous mineral products.

Structural and Field Geology.—The relationship of structure to relief and underground water supply.

The course of practical work in this subject will include both field and laboratory work. The field work (*excursions to areas*

in and outside Mysore for nearly three months during the course) will consist mainly of making topographic maps and sketches with special reference to the relations between Topography and Geology. The laboratory work includes the correlation of field notes and the preparation of final maps and reports.

Each candidate will be required to map and describe from his own personal observation, the geology of an area selected by him with the approval of the professor.

Stratigraphy, Indian Geology and Palæontology.—The study of the chief subdivisions of each system with characteristic fossils. Physical geography and vulcanicity of the different periods. Geology of India brought up to date. Life in the ocean and factors which control its distribution, such as temperature, pressure, depth, and food supply. A brief account of the more important groups of animals living in the sea with special reference to their hard parts, their nature, origin and function. General distribution of the existing fauna and flora and their relation to those of former geological periods. Conditions favouring the work of animals as rock builders. The chief groups of animals that have served as rock builders during the different periods of the earth's history—each of these groups to be studied mainly with reference to their hard parts which commonly constitute rock masses. Chief examples of rocks built up by each of these groups, their thickness, rate of deposition, and stratigraphical distribution with special reference to Indian examples. Study of the past history of particular groups of animals and plants to illustrate problems of evolution.

The knowledge of the candidate will be tested also by practical examinations. *Viva voce* questions may be asked.

(5) Zoology

Major Subject—

Group A

1. Invertebrate Zoology.
2. Vertebrate Zoology.
3. Cytology and Embryology.
4. General Principles and Palæontology.
5. General Cytology.
6. Amphibia.

Group B

7. Practical Zoology.

Minor Subject—

Botany or Geology or Chemistry as in the Pass Course.

The following is the detailed course of study in Zoology:—

The scheme of subjects for the B.Sc. Degree will be treated more completely and further amplified by the inclusion of minor groups like the Dicyemidæ, Orthonectidæ, Nemertea, Nematomorpha, Acanthocephala, Priapulidea and Phoronidea.

Outlines of animal histology and cytology with a course of laboratory work.

The main facts concerning invertebrate and vertebrate embryology with special reference to the development of an orthopterous or lepidopterous insect: echinus, frog, chick and rabbit, with correlated laboratory practice.

Outlines of Palæo-Zoology.

As part of systematic Zoology, students are required to make collections of animals belonging to any one group and maintain notes on their occurrence, general habit, morphological and anatomical features and the main facts of life-history. Any single genus may be selected for a more detailed study. Observational notes of field and marine Zoology will be required to be submitted to the examiners. (At least three weeks during summer or other suitable vacation will be spent at a seaside place to enable students to acquaint themselves with marine Plankton.)

Practical Work.—The practical work will include dissection of as many types as are studied by the candidates, their identification with the aid of manuals, acquaintance with the modern microscopic technique, ability to deal with embryological material and to report on zoological collections.

Candidates are expected to possess a working knowledge of German or French.

Book for Study

Sedgwick, A.: *Students' Text-book of Zoology*, Vols. 1-3.

Books for Reference

1. Camb: *Nat. History*, Vols. 1 to 20.
2. Lankester: *Oxford Treatise on Zoology*, Vols. 1-8.
3. Lang, A.: *Text-book of Comparative Anatomy*.
4. Kingsley: *Comparative Anatomy of Vertebrates*.
5. Weidersheim: *Comparative Anatomy of Vertebrates*.
6. Kellicott: *Chordate Development*.
7. Jenkinson: *Vertebrate Embryology*.
8. Kerr: *Vertebrate Embryology*.
9. MacBride: *Invertebrate Embryology*.
10. Schafer: *Essentials of Histology*.
11. Hegner: *Germ Cycle*.
12. Agar: *Cytology*.

13. Don Castor: *Cytology*.
14. Woods: *Invertebrate Palæontology*.
15. Woodward: *Vertebrate Palæontology*.
16. Lull: *Organic Evolution*.
17. Poulton: *Essays on Evolution*.
18. Thomson: *Heredity*.
19. Kellog: *Darwinism To-day*.
20. Newman: *Readings in Genetics, Evolution, etc.*
21. Romans: *Darwin and After Darwin*.
22. Russel: *Form and Function*.
23. Dahlgreen and Kepner: *Animal Histology*.
24. Klein: *Animal Histology*.
25. Cowdry: *Cytology*.
26. Wilson: *Cell in Development and Inheritance*.
27. Bateson: *Problems in Genetics*.
28. Morgan: *Mechanism of Mendelian Inheritance*.
29. Ward and Whipple: *Fresh Water Biology*.
30. Needham: *General Biology*.
31. Morgan: *Experimental Zoology*.
32. Przibram: *Experimental Zoology*.
33. Jenkinson: *Lectures on Experimental Embryology*.
34. Dendy: *Evolutionary Biology*.

(6) Botany

Major Subject—

Group A

1. Algæ, Fungi and Bryophytes.
2. Pteridophytes and Gymnosperms.
3. Physiology, Histology and Ecology.
4. General Principles, Taxonomy, Economic Botany and History of Botany.
5. (a) Plant Chemistry.*
(b) Genetics.
6. Special Morphology of Angiosperms.

Group B

7. Practical Botany.

Minor Subject—

Zoology or Geology or Chemistry as in the Pass Course.

The following is the detailed course of study in Botany:—

(1) *External Morphology of Pteridophytes and Spermatophytes*.—The root and its modifications. Its equivalents in the lower plants. The stem, its modifications and its equivalents in

* Common to Botany and Chemistry.

the lower plants. The leaf and its modifications. The inflorescence. The flower and its modifications. The origin and evolution of reproductive organs, and the advantages of floral structures. Pollination and fertilisation. Self- and cross-pollination. Post-fertilisation changes. Fruits and seeds and their dispersal.

(2) *Internal Morphology (Anatomy and Histology)*.—The cell and its contents. Methods of division. The cytology of the cell. Origin and development of plant tissues. Primary and secondary tissues. Various kinds of conducting tissues in the different groups. Structure of different parts of the plant body in the different groups of the plant kingdom. Structure of the reproductive organs. Division of reproductive cells. Internal changes attendant on fertilisation.

(3) *Plant Physiology*.—(a) *The Physiology of the Living Cell*.—Physical and chemical properties of protoplasm and the cell wall. Organic and inorganic substances in the living plant. Distinction between colloids and crystalloids and their special properties. Principal types of chemical actions in the plant-body including enzymatic reactions. General principles of physico-chemical equilibrium of vital reactions. Liebig's law of minimum and Blackman's law of limiting factors.

(b) *The Gain of Matter by the Plant Body*.—The substances required by the plant. Their composition and sources of supply. The soil and atmosphere. Processes of absorption by the roots. Absorption of gases by plant organs. The mechanism of gaseous exchange. The theory of selective absorption and antagonism of salts. Absorption by special organs.

(c) *Movements of Substances in the Plant Body*.—Root pressure. Movement of water and the transpiration current. Cellular diffusion of gases and other substances. Permeability of the protoplasm and the cell walls. Movement and storage of organised substances.

(d) *Constructive Metabolism*.—Gain of potential energy. Ultimate source of energy and the quantity absorbed by the plant. Processes of CO_2 assimilation. Assimilation of nitrogen supply and assimilation of heterotrophic plants.

(e) *Destructive Metabolism*.—Respiratory process in various organisms, such as sulphur, iron nitrate and nitrate bacteria. Respiration in higher plants. Factors that influence respiration. Anaerobic respiration and alcoholic fermentation. Respiration in succulents. Energy liberated in respiration and the energy balance sheet of the plant. Waste products of destructive metabolism and their dispersal by the plant. The material balance sheet of the plant.

(f) *Work done by the Plant*.—Growth. Mechanism of differentiation and development. Irritability. Mechanism for perception and conduction of stimulus. Reaction to stimulus. Movements. Protoplasmic, reversible and growth movements. Autonomic and paratonic reproduction. Sexual and asexual conditions favouring these. The physiology of reproduction.

(g) *Organism and Environment*.—Adjustment and adaptation. Reaction of the individual to environment. Different ecological types (Xerophytes, Mesophytes, etc.). Plant communities (associations and formations). Plant successions. Methods of study of vegetation. Principles of plant distribution in space. Endemism.

(4) *Variation, Heredity and Evolution*.—The physical basis and mechanism of inheritance. Theories of origin of species. Mendelism and its applications.

(5) *Classification of Plants*.—A general knowledge of the principles of systematic arrangement of flowering plants. Artificial, natural, and phylogenetic systems of classification. A general knowledge of the flowering plants of India with a fuller knowledge of those of South India, not only with regard to their systematic relationships, but also to their ecology, distribution, and relationships with those of the neighbouring areas.

(6) A detailed study of the structure, development, life-history and taxonomic relationship of the following groups:—

Thallophyta (fungi: especially with reference to their economic importance), Bryophyta, Pteridophyta and Gymnosperms. A knowledge of Palæobotany, especially with reference to the relationship of modern groups.

(7) The sources and commercial applications of the chief economic plant products of India.

Practical Work

The practical examination will include—

- (1) The identification of plants belonging to South India with or without the help of a flora;
- (2) The preparation of material for microscopic examination;
- (3) Experiments in Plant Physiology.

Every candidate will be required to submit—

- (1) A collection of named plants, collected and preserved by himself;

(2) His laboratory note-books;

(3) Microscopic preparations;

(4) A record of field work covering a period of at least nine weeks during the course and any other evidence of work done by him.

(7) *Economics*

Major Subject—

1. Essay.
2. Economic Principles.
3. Economic Organization.
4. Currency and Banking and International Trade.
5. Public Finance.
6. Mathematical Analysis.
7. Economic History.
8. Principles of Accountancy.

Minor Subject—

1. Advanced Statistics.
2. Mathematical Economics and Social Measurements.

Books for Study and Reference

Mathematical Analysis

1. Brown, H. G.: *Higher Mathematics for Engineers and Economists*.
2. Caradoc-Jones: *Mathematical Analysis*.

(8) *Psychology*

Major Subject—

1. General Psychology.
2. Abnormal Psychology.
3. Animal Psychology.
4. Experimental Psychology of Attention, Perception, Imagery, Association, etc. (Theory).
5. Experimental Psychology of Reasoning, Impulses, Emotions, Will, Hypnosis, etc. (Theory).
6. Practical.
7. A prescribed original work of an experimental character, or treating of a new view-point in Psychology, e.g., I. P. Pavlov's "Conditioned Reflexes", Thorndike's "Measurement of Intelligence," Spearman's "Abilities of Man," Sherrington's "Integrative Action of the Nervous System," Head's "Aphasia and Kindred Disorders," Kohler's "Mentality of the Apes," Piaget's "Language and Thought of the Child," Watson's "Behaviourism," Gestalt Psychology, etc.

Minor Subject—

1. Child Psychology.
2. Educational Psychology.
3. Statistical Methods and Thoery of Measurements.
4. Mathematical Analysis.

Note.—The practical examination shall include the valuation of class records of laboratory work. The practical examination shall, in addition, include a *viva voce* test.

*Books for Study and Reference**Major Subject—*

(i) General Psychology

Books for Study

1. McDougall, W.: *An Outline of Psychology*.
2. Spearman, C.: *The Nature of Intelligence and the Principles of Cognition*.

Books for Reference

1. Stout: *Manual of Psychology*.
2. Koffka, K.: *Perception—An Introduction to the Gestalt Theory*.
3. Watson, J. B.: *Psychology from the Behaviourist Standpoint*.
4. Robinson and Robinson: *Readings in General Psychology*.

(ii) Abnormal Psychology

Books for Study

1. Bernard Hart: *Psychology of Insanity*.
2. McDougall, W.: *An Outline of Abnormal Psychology*.

Books for Reference

1. Rivers, W. H. R.: *Instinct and the Unconscious*.
2. Freud, S.: *Lectures on Psycho-Analysis*.
3. Rivers: *Conflict and the Dream*.
4. Bradby: *Logic of the Unconscious Mind*.

(iii) Experimental Psychology

Books for Study

1. Collins and Drever: *Experimental Psychology*.
2. Foster: *Experiments in Psychology*.

Books for Reference

1. Myers, C. S.: *A Text-book of Experimental Psychology*.
2. Kline: *Psychology by Experiment*.

(iv) Animal Psychology

Books for Study

1. Thomson, J. A.: *The Mind of Animals*.
2. Kholer: *The Mentality of Apes*.

Books for Reference

1. Washbourne, M. F.: *Animal Mind*.
2. Lloyd Morgan: *Animal Behaviour*.
3. Alverdes: *Social Life in the Animal World*.
4. Watson, J. B.: *Behaviour—An Introduction to Comparative Psychology*.
5. Wheeler, W. M.: *Social Life among the Insects*.
6. Loeb, J.: *Forced Movements, Tropisms and Animal Conduct*.
7. Pycraft, W. P.: *The Courtship of Animals*.

Minor Subject—

(i) Child Psychology

Books for Study

1. Waddle, C. W.: *An Introduction to Child Psychology*.
2. Gessel, A.: *Psychology of the Pre-School Child*.

Books for Reference

1. Stern, W.: *Psychology of Early Childhood*.
2. Koffka, K.: *Growth of the Mind*.
3. Miller, H. C.: *The New Psychology and the Parent*.

(ii) Educational Psychology

Books for Study

1. Ward, J.: *Psychology Applied to Education*.
2. Fox, C.: *Educational Psychology*.

Books for Reference

1. Sandiford, P.: *Educational Psychology*.
2. Ogden, R. M.: *Educational Psychology*.
3. Gaster and Skinner: *Readings in Educational Psychology*.

SCHEME OF EXAMINATION

[*Vide Ordinance 128 (c)*]

(a) PRELIMINARY EXAMINATION

I. COMPULSORY ENGLISH

				Max. Marks
English Composition I*	..	..	3 hours	100

II. SECOND LANGUAGE

Composition and Translation†	..	3 hours	100
<i>Or</i>			
Translation in respect of Classical Languages	.. .. .	..	100

III. OPTIONAL SUBJECTS

(1) *Physics*

1. Physics I	3 hours	150
2. Physics II	.. .. .	..	150
3. Practical Physics	.. .. .	..	100
4. Class Records	.. .. .	..	50
5. Class Examinations	.. .. .	..	50
TOTAL ..			500

*Same as the first paper for B.A. (Honours.) Preliminary. Max. Marks

Composition	..	75
Translation from English to the Second Language	..	25
TOTAL ..		100

†The following is the scheme of examination in French and Latin :—

French

Prescribed Texts, Grammar and Translation from English into French and from French into English	..	3 hours	100
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Note.—Passages for translation from French into English shall be chosen from the prescribed texts.

Latin

Prescribed Texts, Grammar, Translation from English into Latin	..	3 hours	100
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(2) <i>Mathematics</i>				Max. Marks
1. Pure Mathematics I	3 hours	125
2. Pure Mathematics II	"	125
3. Applied Mathematics— Dynamics, Statics and Astro- nomy	}		..	150
General Statistics, and Application of Mathematics to Economics and Mental and Social Measure- ments				
4. Class Records	..	..	..	50
5. Class Examinations	..	..	..	50
TOTAL				500

(3) <i>Chemistry</i>				
1. Chemistry I	..	..	3 hours	150
2. Chemistry II	..	..	"	150
3. Practical Chemistry	..	..	"	100
4. Class Records	..	..	..	50
5. Class Examinations	..	..	..	50
TOTAL				500

(4) <i>Botany</i>				
1. Botany I	..	..	3 hours	150
2. Botany II	..	..	"	150
3. Practical Botany	..	..	"	100
4. Class Records	..	..	..	50
5. Class Examinations	..	..	..	50
TOTAL				500

(5) <i>Zoology</i>				
1. Zoology I	..	..	3 hours	150
2. Zoology II	..	..	"	150
3. Practical Zoology	..	..	"	100
4. Class Records	..	..	..	50
5. Class Examinations	..	..	..	50
TOTAL				500

(6) *Economics*Max.
Marks

1. Advanced Statistics I	..	..	3 hours	150
2. Advanced Statistics II	..	..	"	150
3. Mathematical Economics	..	..	"	150
4. Social Measurements	..	..	"	150
TOTAL ..				<u>600</u>

(7) *Psychology*

1. Child Psychology	..	..	3 hours	150
2. Educational Psychology	..	..	"	150
3. Statistical Methods and Theory of Measurements	..	..	"	150
4. Mathematical Analysis	..	..	"	150
TOTAL ..				<u>600</u>

(b) FINAL EXAMINATION

(1) *Mathematics*

Group A

1. Pure Mathematics I	..	..	3 hours	100
2. Pure Mathematics II	..	..	"	100
3. Pure Mathematics III	..	..	"	100
4. Pure Mathematics IV	..	..	"	100
5. Applied Mathematics I	..	..	"	100
6. Applied Mathematics II	..	..	"	100
7. Introduction to Mathematical Physics			"	100
TOTAL, GROUP A ..				<u>700</u>

Group B

Special Subject I	..	..	3 hours	100
Special Subject II	..	..	"	100
TOTAL, GROUP B ..				<u>200</u>

Class Work	..	..		100
Class Examinations	..	..		100

TOTAL, GROUPS A AND B .. 1,100

(2) *Physics*Max.
Marks

Group A

1. Physics I: Properties of Matter and Sound	3 hours	100
2. Physics II: Heat and Thermo-Dynamics ..	..	100
3. Physics III: Light .. ..	..	100
4. Physics IV: Electricity and Magnetism ..	..	100
5. Mathematical Physics .. ..	..	100
6. Chemical Physics .. ..	..	100
TOTAL, GROUP A ..		600

Group B

1. Practical Physics I	4 hours	100
2. Practical Physics II .. ..	..	100
3. Practical Chemical Physics .. ..	..	100
TOTAL, GROUP B ..		300
Class Work .. ..	..	100
Class Examinations .. ..	..	100
TOTAL, GROUPS A AND B ..		1,100

(3) *Chemistry*

Group A

1. Chemistry I: Inorganic	3 hours	100
2. Chemistry II: Physical .. ..	..	100
3. Chemistry III: Organic .. ..	..	100
4. (a) Plant Chemistry I* .. ..	..	} 100
Or	..	
(b) Colloid Chemistry I .. ..	..	} 100
5. (a) Plant Chemistry II .. ..	..
Or	..	} 100
(b) Colloid Chemistry II (Practical) ..	6 ..	
TOTAL, GROUP A ..		500

* Common to Botany and Chemistry.

Group B				Max. Marks
Practical Chemistry I: Inorganic	..	6 hours		100
Practical Chemistry II: Physical	..	"		100
Practical Chemistry III: Organic	..	"		100
TOTAL, GROUP B				300
Class Work	..	..	..	100
Class Examinations	..	..	..	100
TOTAL, GROUPS A AND B				1,000

(4) *Geology*

Group A

1. Geology I: General and Structural Geology	..	3 hours	100
2. Geology II: Crystallography and Mineralogy	..	..	100
3. Geology III: Petrology	..	..	100
4. Geology IV: Stratigraphy and Indian Geology	..	..	100
5. Geology V: Palæontology	..	..	100
TOTAL, GROUP A ..			500

Group B

Practical Geology I	..	..	3 hours	100
Practical Geology II	..	..	"	100
Practical Geology III	..	..	"	100
Practical Geology IV	..	..	6 "	100
TOTAL, GROUP B				400
Class Work	..	..	..	100
Class Examinations	..	..	..	100
TOTAL, GROUPS A AND B				1,100

(5) *Zoology*

Group A

1. Zoology I: Invertebrate Zoology	..	3 hours	100
2. Zoology II: Vertebrate Zoology	..	"	100
3. Zoology III: Cytology and Embryology	..	"	100

			Max. Marks
4. Zoology IV: General Principles and Palæontology ..	3 hours		100
5. Zoology V: General Cytology ..	"		100
6. Zoology VI: Amphibia ..	"		100
TOTAL, GROUP A ..			600
Group B			
Practical Zoology I ..	3 hours		100
Practical Zoology II ..	"		100
Practical Zoology III ..	"		100
TOTAL, GROUP B ..			300
Class Work ..			100
Class Examinations ..			100
TOTAL, GROUPS A AND B ..			1,100

(6) Botany

Group A

1. Botany I: Algæ, Fungi Bryophytes ..	3 hours	100
2. Botany II: Pteridophytes and Gymnosperms ..	..	100
3. Botany III: Physiology, Histology and Ecology ..	..	100
4. Botany IV: General Principles, Taxonomy, Economic Botany and History of Botany ..	..	100
5. Botany V: (a) Plant Chemistry I*	} ..	100
Or		
(b) Genetics	..	100
6. Botany VI: Special Morphology of Angiosperms ..	..	100
TOTAL, GROUP A ..		600

Group B

Practical Botany I	..	..	3 hours	100
Practical Botany II	..	..	"	100
Practical Botany III	..	..	"	100
TOTAL, GROUP B ..				300

* Common to Botany and Chemistry.

				Max. Marks
Class Work	..	..	..	100
Class Examinations	..	..	..	100
TOTAL, GROUPS A AND B ..				1,100

(7) *Economics*

1. Essay	..	..	... 3 hours	125
2. Economic Principles	..	..	..	125
3. Economic Organisation	..	..	..	125
4. Currency and Banking and International Trade	..	..	..	125
5. Public Finance	..	..	..	125
6. Mathematical Analysis	..	..	..	125
7. Economic History	..	..	..	125
8. Principles of Accountancy	..	..	..	125
Class Work (Examination and Essays)				100
TOTAL ..				1,100

(8) *Psychology*

1. General Psychology	..	..	3 hours	125
2. Abnormal Psychology	..	..	..	125
3. Animal Psychology	..	..	..	125
4. Experimental Psychology of Attention, Perception, Imagery, Association, etc. (Theory)	..	..	..	125
5. Experimental Psychology of Reasoning, Impulses, Emotions, Will, Hypnosis, etc. (Theory)	..	..	..	125
6. Practical, First Paper	..	..	..	125
7. Practical, Second Paper	..	..	..	100
8. A prescribed original work	..	..	..	100
Class Work	..	..	..	150
TOTAL ..				1,100

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide* Ordinances 83 to 87]

Master's Degree Examination**CONDITIONS OF ADMISSION***

[*Vide* Ordinance 89)]

COURSES OF STUDY (GENERAL)

[*Vide* Ordinances 88 to 90]

COURSES OF STUDY (DETAILED)

[*Vide* Ordinance 217 (d) and (e)]

(a) Master of Arts**(1) English**

The course of study shall comprise:—

1. Special Period—Poetry and Prose.

2. Special Author—General and Prescribed Text...

There will be a general study of the special period, and particular reference to particular texts but no annotation work.

The list of special authors is: Spencer, Milton, Wordsworth, Shelly.

In the study of the special author, there will be a comprehensive study of his life and English works, and a detailed verbal study (involving annotation questions of certain prescribed works).

(2) Kannada

The course of study shall comprise:—

1. Kannada Literature: Study of a selected writer or a special period.

2. Kannada Poetics and Prosody, with a comparative study of Sanskrit and other Dravidian systems.

3. Comparative Dravidian Philology with special reference to Kannada.

4. Essay.

*No one is allowed to enter for the Master's Degree Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

(3) *Sanskrit*

The course of study shall comprise:—

1. *Veda*: (a) Detailed study of prescribed books representing the various stages of the Vedic Literature.

(b) A critical enquiry into the growth and value of the Vedic Literature in general (including the Vedangas).

2. *One of the following*:—

Darsana: (a) A detailed study of prescribed books relating to one of the Darsanas.

(b) A critical enquiry into the growth and value of Darsana Literature in general.

Vyakarana: (a) A detailed study of the prescribed books relating to Vyakarana Sastra.

(b) A critical enquiry into the growth and value of Vyakarana Literature.

Alankara: (a) A detailed study of prescribed books, relating to Alankara Sastra.

(b) A critical enquiry into the growth and value of Alankara Literature.

Philology: (a) History of Sanskrit Language.

(b) Elements of Indo-German Philology.

(4) *Persian*

The course of study shall comprise:—

1. History of Persian Literature with special reference to the Moghul Period.

2. Development of Persian Literature in India.

3. Any two of the following:—

(1) Indo-Iranian Philology.

(2) The critical study of Sufistic Mysticism.

(3) The Development of Persian Odes and Mathnawi.

(4) The Historical and Biographical Literature.

(5) The Development of Persian Literature in India from 1200 to 1700 A.D.

(5) *History*

The course of study shall comprise:—

1. Historic Method.

2. Indian Historical Research since about 1884.

3. A special period of history to be studied with reference to original sources.

(3) *Sanskrit*

The course of study shall comprise:—

1. *Veda*: (a) Detailed study of prescribed books representing the various stages of the Vedic Literature.

(b) A critical enquiry into the growth and value of the Vedic Literature in general (including the Vedangas).

2. *One* of the following:—

Darsana: (a) A detailed study of prescribed books relating to one of the Darsanas.

(b) A critical enquiry into the growth and value of Darsana Literature in general.

Vyakarana: (a) A detailed study of the prescribed books relating to Vyakarana Sastra.

(b) A critical enquiry into the growth and value of Vyakarana Literature.

Alankara: (a) A detailed study of prescribed books, relating to Alankara Sastra.

(b) A critical enquiry into the growth and value of Alankara Literature.

Philology: (a) History of Sanskrit Language.

(b) Elements of Indo-German Philology.

(4) *Persian*

The course of study shall comprise:—

1. History of Persian Literature with special reference to the Moghul Period.

2. Development of Persian Literature in India.

3. Any *two* of the following:—

(1) Indo-Iranian Philology.

(2) The critical study of Sufistic Mysticism.

(3) The Development of Persian Odes and Mathnawi.

(4) The Historical and Biographical Literature.

(5) The Development of Persian Literature in India from 1200 to 1700 A.D.

(5) *History*

The course of study shall comprise:—

1. Historic Method.

2. Indian Historical Research since about 1884.

3. A special period of history to be studied with reference to original sources.

5. Theory of Numbers.
6. Theory of Functions of a Real Variable.
7. Differential Geometry.
8. Theory of Groups.
9. Theory of Matrices and Integral Equations.
10. Astronomy and Astro-Physics.
11. Electro-Magnetic Theory.
12. Relativity.
13. Quantum Mechanics.
14. Analytical Dynamics.
15. Hydro-Mechanics.
16. Celestial Mechanics.
17. Statistical Mechanics and Thermo-Dynamics.
18. Potential Theory.
19. Theory of Elasticity.
20. Differential Equations.

(2) *Physics*

The course of study shall comprise:—

Compulsory

Modern Physics.*

Optional

Any one of the following:—

1. X-rays.
2. Wireless.
3. Spectroscopy.
4. Scattering of Light.
5. Cosmic Rays and Nuclear Physics.
6. Wave Mechanics and the Quantum Theory.

* The following is the scope of the examination:—

Discharge of Electricity through gases.
The Electro-Magnetic Field. The Electron Theory.
Optical Spectra.
Light Scattering.
Thermionics.
Photoelectricity.
The Metallic State.
Magnetic Properties of Atoms and Molecules.
Low Temperature Phenomena.
Dipole Moments.
X-Rays. Cosmic Radiation.
Radioactivity.
Nuclear Physics.
Electric Oscillations and Waves.
Special Theory of Relativity.
Elements of Quantum Mechanics.

(3) *Chemistry*

The course of study shall comprise:—

1. General Chemistry (Inorganic, Physical and Organic).
2. Inorganic Chemistry.
3. Physical Chemistry.
4. Organic Chemistry.

Candidates who offer a thesis will do General Chemistry and one of the other three.

(4) *Botany*

The course of study shall comprise:—

Compulsory

Recent advances in Botany as could be gathered by a study of the following journals from 1920:—

1. *Annals of Botany.*
2. *New Phytologist.*
3. *Botanical Gazette.*
4. *American Journal of Botany.*
5. *Journal of the Indian Botanical Society.*
6. *Memoirs of the Department of Agriculture.*

Optional

Any two of the following subjects:—

1. Special Morphology of Angiosperms.
2. Special Morphology of Gymnosperms.
3. Special Morphology of Pteridophytes.
4. Special Morphology of Bryophytes.
5. Special Morphology of Algæ.
6. Special Morphology of Fungi.
7. Econological Anatomy.
8. Anatomy, Morphology and Distribution of Lichens.
9. Special Cytology.

(5) *Geology*

The course of study shall comprise:—

Compulsory

Recent advances in Geology.

Optional

Any one of the following:—

1. Petrology.
2. Mineralogy and Crystallography.
3. Stratigraphy and Palæontology.

(6) *Zoology*

The course of study shall comprise:—

Compulsory

A course covered by the following:—

1. *Cytology*—W. E. Agar.
2. *Cell in Development and Inheritance*—E. B. Wilson.
3. *Text-book of Embryology*—E. W. McBride.
4. *Text-book of Embryology*—J. W. Jenkinson.
5. *Text-book of Embryology*—Graham Kerr.
6. *Structure and Development of Vertebrates from the Developmental Standpoint*—E. S. Goodrich.
7. *Orders of Mammals*.—W. K. Gregory.

Optional

Any *one* of the following groups and of the literature bearing on the subject of study not earlier than 1922:—

1. Land Planarians.
2. Fresh Water Crustacea.
3. Scorpionida.
4. Land and Fresh Water Mollusca of Mysore (S. India).
5. Hirudinea.
6. Oligochæta of Mysore (S. India).
7. Fresh Water Fishes of Mysore (S. India).
8. Amphibia of Mysore (S. India).
9. Reptiles of Mysore (S. India).
10. Mammalian Embryology.
11. Comparative Anatomy of Domesticated Animals.

In respect of the compulsory course, the candidates are required to submit a set of slides illustrative of not less than six stages of the developmental features of any vertebrate and the cytology of the glandular and germinal cells. They should produce notes giving a description of slides studied by them.

In respect of the optional course, the candidates of any year shall offer only *one* of the groups. They are required to present their collection of material and evidence of the study of the forms collected.

SCHEME OF EXAMINATION

[Vide Ordinance 218 (d) and (e)]

(a) M.A.

(i) English

				Max. Marks
1.	Special Period—Poetry	..	.. 3 hours	100
2.	Special Period—Prose	..	.. ”	100
3.	Special Author—General	..	.. ”	100
4.	Special Author—Texts	..	.. ”	100
5.	<i>Viva voce</i>	..	..	100
TOTAL ..				500

(2) Kannada

1.	Literature	..	.. 3 hours	100
2.	Poetics and Prosody	..	.. ”	100
3.	Comparative Dravidian Philology with special reference to Kannada	..	.. ”	100
4.	Essay	..	.. ”	100
5.	<i>Viva voce</i>	..	..	100
TOTAL ..				500

(3) Sanskrit

1.	Veda I	..	.. 3 hours	100
2.	Veda II	..	.. ”	100
3.	and 4. One of the following groups:—			
	(i) Darsana I	..	.. ”	100
	Darsana II	..	.. ”	100
	(ii) Vyakarana I	..	.. ”	100
	Vyakarana II	..	.. ”	100
	(iii) Alankara I	..	.. ”	100
	Alankara II	..	.. ”	100
	(iv) Philology I	..	.. ”	100
	Philology II	..	.. ”	100
5.	<i>Viva voce</i>	..	..	100
TOTAL ..				500

(4) *Persian*Max.
Marks

1. History of Persian Literature ..	3 hours	100
2. Development of Persian Literature in India ..	..	100
3. and 4. Any two of the following:—	..	..
(i) Indo-Iranian Philology ..	..	100
(ii) The Critical Study of Sufistic Mysticism ..	..	100
(iii) The Development of Persian Odes and Mathnawi..	..	100
(iv) The Historical and Biographical Literature ..	..	100
(v) The Development of Persian Literature in India from 1200 to 1700 A.D. ..	..	100
5. <i>Viva voce</i> ..	..	100
TOTAL ..		500

(5) *History*

1. Historic Method ..	3 hours	100
2. Indian Historical Research since about 1814, I ..	..	100
3. Indian Historical Research since about 1884, II ..	..	100
4. A Special Period of History ..	..	100
5. <i>Viva voce</i> ..	..	100
TOTAL ..		500

(6) *Economics*

1. Recent Developments in Economic Theory ..	3 hours	100
2. Recent Developments in Applied Economics ..	..	100
3. Special Subject I ..	..	100
4. Special Subject II ..	..	100
5. <i>Viva voce</i> ..	..	100
TOTAL ..		500

				Max. Marks
(7) <i>Philosophy</i>				
1.	Thesis	..	..	400
2.	<i>Viva voce</i>	..	..	100
TOTAL ..				500

(8) *Mathematics*

(a) Compulsory

1.	Analysis	..	..	3 hours	100
2.	Theoretical Statistics	..	..	..	100

(b) Optional

3.	and 4. Any <i>two</i> of the following:—				
	(i) Theory of Functions of a Complex Variable.	..	..	3 hours	100
	(ii) Projective and Non-Euclidean Geometry	..	..	..	100
	(iii) Theory of Differential Equations	..	..	..	100
	(iv) Elliptic Functions	..	..	..	100
	(v) Theory of Numbers	..	..	..	100
	(vi) Theory of Matrices and Integral Equations	..	..	..	100
	(vii) Theory of Functions of a Real Variable	..	..	..	100
	(viii) Differential Geometry	..	..	..	100
	(ix) Actuarial Science—Problems of Graduation	..	..	..	100
	(x) Actuarial Science—Problems of Valuation	..	..	..	100
	(xi) Biometrics	..	..	..	100
	(xii) Mathematical Economics	..	..	..	100
	(xiii) Difference Equations	..	..	..	100
5.	<i>Viva voce</i>	..	..	..	100
TOTAL ..					500

(b) M.Sc.

(1) *Mathematics*

(a) Compulsory

1.	Analysis	..	..	3 hours	100
2.	Geometries	..	..	..	100

				Max. Marks
(b) Optional				
3. and 4.	Any two of the following:—			
(i)	Theory of Functions of a Complex Variable	3 hours	100	
(ii)	Projective and Non-Euclidean Geometry	"	100	
(iii)	Theory of Differential Equations	"	100	
(iv)	Elliptic Functions	"	100	
(v)	Theory of Numbers	"	100	
(vi)	Theory of Functions of a Real Variable	"	100	
(vii)	Differential Geometry	"	100	
(viii)	Theory of Groups	"	100	
(ix)	Theory of Matrices and Integral Equations	"	100	
(x)	Astronomy and Astro-Physics	"	100	
(xi)	Electro-Magnetic Theory	"	100	
(xii)	Relativity	"	100	
(xiii)	Quantum Mechanics	"	100	
(xiv)	Analytical Dynamics	"	100	
(xv)	Hydro-Mechanics	"	100	
(xvi)	Celestial Mechanics	"	100	
(xvii)	Statistical Mechanics and Thermo-Dynamics	"	100	
(xviii)	Potential Theory	"	100	
(xix)	Theory of Elasticity	"	100	
(xx)	Differential Equations	"	100	
5.	Viva voce		100	
TOTAL ..			500	

(2) Physics

(a) Compulsory

1.	Modern Physics I	3 hours	100
2.	Modern Physics II	"	100

(b) Optional

3. and 4.	One of the following groups:—			
(i)	X-rays I	3 hours	100	
	X-rays II	"	100	
(ii)	Wireless I	"	100	
	Wireless II	"	100	
(iii)	Spectroscopy I	"	100	
	Spectroscopy II	"	100	
(iv)	Scattering of Light I	"	100	
	Scattering of Light II	"	100	

			Max. Marks
(v) Cosmic Rays and Nuclear Physics I	3 hours		100
Cosmic Rays and Nuclear Physics II	„		100
(vi) Wave Mechanics and the Quantum Theory I	„		100
Wave Mechanics and the Quantum Theory II	„		100
5. <i>Viva voce</i>	„		100
TOTAL ..			500

(3) *Chemistry*

1. General Chemistry...	..	..	3 hours	100
2. Inorganic Chemistry	..	..	„	100
3. Physical Chemistry ..	..	..	„	100
4. Organic Chemistry	..	..	„	100
5. <i>Viva voce</i>	..	..	„	100
TOTAL ..				500

(4) *Botany*(a) *Compulsory*

1. Recent Advances in Botany I	..	3 hours	100
2. Recent Advances in Botany II	..	„	100

(b) *Optional*

3. and 4. Any two of the following:—		
(i) Special Morphology of Angiosperms	3 hours	100
(ii) Special Morphology of Gymnosperms	..	100
(iii) Special Morphology of Pteridophytes	..	100
(iv) Special Morphology of Bryophytes	..	100
(v) Special Morphology of Algæ	..	100
(vi) Special Morphology of Fungi	..	100
(vii) Econological Anatomy	..	100
(viii) Anatomy, Morphology and Distribution of Lichens	..	100
(ix) Special Cytology	..	100
5. <i>Viva voce</i>	..	100
TOTAL ..		500

				Max. Marks
(5) <i>Geology</i>				
(a) Compulsory				
1. Geology I	..	..	3 hours	100
2. Geology II	..	..	..	100
(b) Optional				
3. and 4. One of the following groups:—				
(i) Petrology I	..	..	3 hours	100
Petrology II	..	..	..	100
(ii) Mineralogy and Crystallography I	..	..	..	100
Mineralogy and Crystallography II	..	..	..	100
(iii) Stratigraphy and Palæontology I	..	..	..	100
Stratigraphy and Palæontology II	..	..	..	100
5. <i>Viva voce</i>	..	..	..	100
TOTAL ..				500

(6) <i>Zoology</i>				
(a) Compulsory				
1. Zoology I	..	..	3 hours	100
2. Zoology II	..	..	..	100
(b) Optional				
3. and 4. One of the following groups:—				
(i) Land Planarians I	..	..	3 hours	100
Land Planarians II	..	..	..	100
(ii) Fresh Water Crustacea I	..	..	..	100
Fresh Water Crustacea II	..	..	..	100
(iii) Scorpionida I	..	..	..	100
Scorpionida II	..	..	..	100
(iv) Land and Fresh Water Mollusca of Mysore (S. India) I	..	..	..	100
Land and Fresh Water Mollusca of Mysore (S. India) II	..	..	..	100
(v) Hirudinea I	..	..	..	100
Hirudinea II	..	..	..	100
(vi) Oligochaeta of Mysore (S. India) I	..	..	..	100
Oligochaeta of Mysore (S. India) II	..	..	..	100
(vii) Fresh Water Fishes of Mysore (S. India) I	..	..	..	100
Fresh Water Fishes of Mysore (S. India) II	..	..	..	100
(viii) Amphibia of Mysore (S. India) I	..	..	..	100
Amphibia of Mysore (S. India) II	..	..	..	100
(ix) Reptiles of Mysore (S. India) I	..	..	..	100
Reptiles of Mysore (S. India) II	..	..	..	100

			Max. Marks
(x)	Mammalian Embryology I ..	3 hours	100
	Mammalian Embryology II ..	"	100
(xi)	Comparative Anatomy of Domesti- cated Animals, I ..	"	100
	Comparative Anatomy of Domesti- cated Animals, II ..	"	100
5.	<i>Viva voce</i> ..	"	100
TOTAL ..			500

Note.—A thesis may be offered in lieu of all the four papers.

RULES RELATING TO THE SUBMISSION AND PUBLICATION OF THESIS OFFERED FOR THE MASTER'S DEGREE EXAMINATION OF THE UNIVERSITY.

A. Submission of Thesis

1. The thesis shall be sent in a sealed cover on or before the prescribed date and shall be submitted in duplicate written in hand, in ink, typed or printed. Notes, drawings, maps and other appendices referred to in the thesis shall also be submitted in duplicate.

2. The thesis shall embody the results of research or investigation carried out by the candidate.

3. It shall be accompanied by a statement indicating the sources from which the candidate has derived information or guidance for the work and extent to which he has availed himself of the work of others and the portions of the thesis which he claims as original.

4. It shall be accompanied by a declaration to the effect that the thesis is not substantially the same as any that has already been submitted for a degree in this or any other University.

5. It shall be accompanied by a report from the Professor of the University under whom the work of the candidate was conducted.

Note.—(i) A candidate for the M.A. or M.Sc. Degree may offer as part of his thesis results of work completed by him and published before the year of study for the degree and he shall also be permitted to publish the result of the work done by him during the year before the thesis is submitted to the University.

(ii) A candidate offering a thesis for the examination for the Master's Degree not successful in the examination and offering an amended or amplified thesis at a subsequent examination shall furnish with the thesis a note indicating the amendments or the extent of the amplification or both; and in addition, a certificate to the effect that the thesis has not been submitted for a degree in any other University either in its original or in its amended or amplified form.

B. Publication

1. The thesis shall be considered the property of the University.
2. The University shall have the right to publish any thesis in such manner as it deems fit.
3. The permission of the University Council shall be obtained in each case for publishing it.
4. The University may suggest any modification in regard to the thesis which should be effected before permission is granted for publishing it.
5. In publishing a thesis, it shall be mentioned that the thesis was offered for the Master's Degree of this University.

B. T. Degree Examination**CONDITIONS OF ADMISSION***

[*Vide Ordinance 92*]

COURSES OF STUDY (GENERAL)

[*Vide Ordinance 93*]

COURSES OF STUDY (DETAILED)

[*Vide Ordinance 217 (f)*]

(1) Principles of Education

1. The need for an adequate Philosophy of Life and Education. The changing nature of the present-day world. The demands on education. The problems of life and education in India. Relation between them.
2. The aims of Education. A historical and critical survey of some educational aims: Narrow aims: Mind-body, Intellect, character, practical efficiency—personal culture, knowledge, mental power. Comprehensive aims: Harmonious development of the individual, personal and social growth, education as continuous reconstruction of experience. Aims in terms of human wants.
3. The Agencies of Education: The Family. The Community. The Church. The State. The School. Their interdependence.

*No one is allowed to enter for the B.T. Degree Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

4. Data of Education: Innate tendencies of the child. Social inheritance. Nature and nurture. Individual differences and their educational implications.

5. Materials of instruction: The various stages of child development and the curriculum for different stages.

6. The curriculum: Principles of curriculum construction. Objectives, a basis for curriculum construction. School studies, their values and their classification.

7. The method of instruction: General principles.

8. Outcomes of the educational process: Knowledge, meanings, facts, principles; Habits, skills; and Ideals and attitudes.

9. The method of appraisal: General principles.

10. Recent developments in educational practice. The Project Method. The Dalton Plan, the Howard Plan, the Winnetka Plan, the Gary Plan. The Platoon School, Nursery Education.

Books for Study

1. Rayment, T.: *Principles of Education*.
2. Dewey, J.: *Democracy and Education*.

Books for Reference

1. Kilpatrick, W. H.: *Education for a Changing Civilization*.
2. Nunn, T. P.: *Education—Its Data and First Principles*.
3. Burton, W. H.: *Introduction to Education*.
4. Russel, B.: *Education and the Social Order*.
5. Bode, B. H.: *Modern Educational Theories*.
6. Adams, J.: *Modern Developments in Educational Practice*.
7. Thorndike, E. L., and Gates, A. I.: *Elementary Principles of Education*.
8. Findlay, J. J.: *The Foundations of Education*, Vols. I and II.

(2) Educational Psychology including Mental and Educational Measurements

I. EDUCATIONAL PSYCHOLOGY

A. Introductory

Scope of educational psychology. Methods of psychological study and investigation as applied to educational problems.

The biological background of education—Laws of heredity. The part played by environment in the development of innate traits. Are acquired traits inheritable?

B. The Acquisition of Knowledge and Skills

1. The learning process: Forms of learning. Laws of learning. The problem of *transfer of training*. Motivation of learning.

2. Attention: Its nature and types. Causes and symptoms of inattention. Favourable conditions for securing sustained attention.

3. Fatigue: Types, symptoms and causes of fatigue. Preventive and remedial measures for school fatigue.

C. The Inculcation of Right Habits of Thinking

1. Thought and its relation to language. Growth of language mechanisms from childhood.

2. Empirical and scientific thinking. Common errors in thinking. The cultivation of the scientific attitude of mind.

3. What is intelligence? Growth and maturity of intelligence. Is intelligence innate?

D. Psychology of Character Training

1. The shaping of the basic impulses of Curiosity, Escape, Pugnacity, Appeal, Parental protection, Herd, Sex, Laughter, Play, etc., for purposes of character building.

2. The problems of Freedom, Authority and Discipline from the psychological standpoint.

3. The educational applications of Psycho-analysis.

II. MENTAL AND EDUCATIONAL MEASUREMENTS

A. Introductory

1. Inaccuracies in the current system of marking and examinations. Unreliability of estimates of intelligence and character traits. Essentials of valid measurement.

2. Some simple statistical concepts and devices such as the Normal Curve of Distribution, the Median, the Semi-interquartile Range, the Probable Error and the Foot-rule method of correlation.

B. Mental Measurements

1. Tests of general ability: Individual, Group, Performance and Pre-school tests of intelligence.

2. Principles of test construction. Limitations of intelligence tests. The value of intelligence tests for the teacher.

3. Objective methods of diagnosing personality traits.

C. Educational Measurements

1. Tests suitable for the Primary and Middle Schools such as Reading, Spelling, Grammar, Composition, Arithmetic, etc.
2. Attainment tests suitable for High School grades for subjects such as History, Geography, Science, etc.
3. Principles of educational test construction. Establishment of norms. The value and limitations of new examination methods.

Books for Study

1. Sandiford: *Educational Psychology*.
2. Ward, J.: *Psychology Applied to Education*.
3. Russel, B.: *On Education*.
4. Ballard: *Group Tests of Intelligence*.
5. Symonds: *Measurements in Secondary Education*.
6. Gessel: *Infancy and Human Growth*.

Books for Reference

1. Gast and Skinner: *Readings in Educational Psychology*.
2. Watson: *Psychological Care of the Infant and Child*.
3. Dewey: *How We Think*.
4. McDougall, W.: *Outlines of Psychology*.
5. Ballard: *Mental Tests*.
6. Ballard: *The New Examiner*.
7. Monroe: *Measuring Results in Teaching*.
8. Levine and Marks: *Testing Intelligence and Achievement*.
9. Drever: *Performance Tests of Intelligence*.

(3) Methods

I. GENERAL PRINCIPLES OF METHOD

1. The meaning of Method, broad and narrow.
2. The process of teaching; General principles of teaching and learning.
3. The planning of Instruction: Teaching units; Lesson plans and notes of lessons.
4. The Methods of Instruction. The maxims of method; their uses and limitations. Different types of lessons and their applicability to classroom teaching.
5. Devices of Teaching: Text-books, their uses and abuses. Collateral reading. Questions and Answers. Examinations. Illustrations. Note Books.

*II. Special Methods***A. English (Compulsory).—**

1. Language in human life. General principles of teaching and learning languages.

2. Ancient and Modern languages. Mother-tongue and foreign tongue.—Principles applicable to their teaching.

3. Aims of language teaching:

(1) Comprehension.

(2) Expression.

(3) Appreciation—linguistic and æsthetic.

4. The language problem in India. Position of Modern Indian languages and of English.

5. Methods of teaching:

(1) Direct Method;

(2) Translation Method;

(3) Comparative Method;

(4) West's New Method.

6. Teaching of Reading, Handwriting, Spelling, Grammar and Composition.

7. Teaching of English prose and poetry, Cultivation of understanding and appreciation.

B. English (Optional).—

1. Phonetics, Reading and writing of phonetic matter. Speech training.

2. Rhetoric and style, principles of effective narration, description and exposition. Examples from literature.

3. Literary forms in—

(1) Prose;

(2) Poetry. Discussion with examples.

4. Methods of teaching Literature with special reference to the higher classes in the High School.

C. History.—

1. The Nature and Scope of History.

2. The aims of teaching History:

(1) Knowledge and search for truth.

(2) Understanding the present in the light of the past.

(3) Development of civic and national consciousness.

(4) Development of international understanding and sympathy.

(5) Development of critical and ethical judgment.

3. Methods of Teaching History. Their comparative values and their suitability to different grades of schools.

- (1) The Chronological Method.
- (2) The Retrospective Method.
- (3) The Concentric Method.
- (4) The Biographical Method.
- (5) The Source Method.

4. Teaching appliances and their use.

D. Geography.—

1. The Nature and Scope of Geography.

2. The aims of teaching Geography:

- (1) Knowledge of Man's Physical and Social environment. Regional Geography.
- (2) Application of scientific knowledge to the explanation and understanding of natural phenomena. Rational Geography.
- (3) Cultivation of geographical imagination and reasoning.

3. Methods of teaching geography and their suitability to different grades of schools:—

- (1) The Observational Method.
- (2) The Descriptive Method.
- (3) The Regional Method.

4. Teaching appliances and their use.

E. Mathematics.—

1. Aims of teaching Mathematics:

- (1) Practical;
- (2) Cultural;
- (3) Social.

2. Place of Mathematics in Science.

3. The distinctive characteristics of the different branches of Mathematics.

4. Methods of Teaching:

- (1) The Inductive and the Deductive.
- (2) The Analytical.
- (3) The Practical and the Graphic.
- (4) The Heuristic.

5. Appropriateness of the different methods in different grades of schools.

6. The Beginnings of Algebra.

7. The place of definitions, axioms, postulates, etc., in the teaching of Geometry.

8. Methods of developing the concepts of Trigonometrical Ratios.

F. Science.—

1. The meaning of Science.
2. Aims of teaching Science :
 - (1) Practical;
 - (2) Cultural;
 - (3) Social.
3. Unity of Sciences.
4. Methods of Teaching :
 - (1) The Inductive and the Deductive Methods.
 - (2) The Heuristic Method.
 - (3) The Demonstration and the Laboratory Methods.
 - (4) The Topical Method.
5. Laboratory—its equipment and management.

Books for Study

General.—

1. Burton, W. H.: *The Nature and Direction of Learning.*
2. Reeves, C. E.: *Standards for High School Teaching.*
3. Strayer, G. O.: *A Brief Course in the Teaching Process.*
4. Hughes and Hughes: *Learning and Teaching.*

English (Compulsory).—

1. Thompson and Wyatt: *The Teaching of English in India.*
2. Ballard, P. B.: *Teaching of the Mother Tongue.*

English (Optional).—

1. Jones, D.: *The Pronunciation of English.*
2. Hudson, W. H.: *Introduction to the Study of English Literature.*
3. Palmer: H. E.: *Principles of Language Teaching.*

History.—

1. Johnson, H.: *The Teaching of History.*
2. Keatinge, M. W.: *Studies in the Teaching of History.*

Geography.—

1. Bamard, H.: *Principles and Practice of Geography Teaching.*
2. Fairgrieve, J.: *Geography in School.*

Mathematics.—

1. Smith, D. E.: *Teaching of Elementary Mathematics.*
2. Schultze, A.: *The Teaching of Mathematics in Secondary Schools.*

Science.—

1. Westaway, F. W.: *Science Teaching: What it was; What it is and What it might be.*
2. Brown: *Teaching of Science.*
3. Rennies: *Aims and Methods of Nature Study.*

*Books for Reference***General.—**

1. Board of Education: *Hand-book of Suggestions for Teachers.*
2. Adams, J.: *The New Teaching.*
3. Welton, J.: *Principles and Methods of Teaching.*
4. Stormzand, M. J.: *Progressive Methods of Teaching.*

English (Compulsory).—

1. Ballard, P. B.: *Thought and Language.*
2. Ryburn, W. M.: *Suggestions for the Teaching of English in India.*

English (Optional).—

1. Bradley: *The Making of English.*
2. Saintsbury: *A Short History of English Literature.*

History.—

1. Rushbrook Williams: *Handling of Historical Material.*
2. Happold, F. C.: *The Approach to History.*

Geography.—

1. Dudestamp: *How to Teach Geography in the Schools of India.*
2. Macnee, E. A.: *Suggestions for the Teaching of Geography.*

Mathematics.—

1. Nunn, T. P.: *The Teaching of Algebra.*
2. Potter: *The Teaching of Arithmetic.*
3. Lanslaw: *Teaching Mathematics.*
4. Godfrey and Siddons: *The Teaching of Elementary Mathematics.*

Science.—

1. Preston, C. E.: *The High School Science Teacher and his Work.*
2. Cawthorne, H. H.: *Science in Education.*
3. Smith and Hall: *Teaching of Physics and Chemistry.*
4. Von Wyss: *The Teaching of Nature Study.*

(4) Comparative Study of Educational Systems**(i) Introductory—**

The aims of a national system of education. The remarkable growth of national systems in the 19th century. Brief survey of Pre-British Education in India—Maktabs, Patasalas, Mutts and Madrasahs. History of British Education in India. The problem of a national system of education for India.

(ii) Educational Administration—

Central and Local Control of Education. Advantages and Disadvantages.

England: (1) Central Control: The Board of Education. Its Organisation and Function. The Inspectorate.

(2) Local Control: The Borough and County Councils. Education Committee—their powers and responsibilities. Relation of central and local authorities.

United States of America: The Federal Agencies for Education. Decentralisation. Recent tendencies towards centralisation within each State. Local bodies in each State.

India: (1) Central Control: Centralisation of control within each Province. The Minister of Education. The Director of Public Instruction. The Inspectorate.

(2) Local Control: District Boards and Municipalities—their powers and responsibilities.

(iii) Educational Organisations—

Diversity of practices in England. England more a political than a social democracy. Democratic system of education in the United States of America. The Common School. Tendencies in India.

General organisation of the school systems in England, U.S.A. and India.

(iv) Elementary Education—

Aim, organisation, curriculum, staff, methods and tendencies of elementary education in England and U.S.A.

India: Problem of illiteracy and Educational Mortality. Compulsory Education. Difficulties of enforcement. Present state of legislation and practice in various provinces.

(v) Post-Elementary Education—

Post-Elementary Education different from Secondary Education.

England: The Senior Elementary Schools and the Central Schools.

U.S.A.: The Junior High School.

India: The present tendency of all elementary education leading to Secondary Education. Senior vernacular and higher elementary schools—Need for greater development.

(vi) Secondary Education—

England: The Public Schools, Grammar Schools. Council Schools and Private Secondary Schools. Marked Features of English Secondary Education.

U.S.A. : The Junior and Senior High Schools. Special Features of American Secondary Education.

India: Present Organisation of Secondary Education. Defects of Grant-in-aid System. The problem of medium of instruction. Uniformity of type. Need for diversity of institutions. Introduction of vocational courses.

(vii) Vocational Education—

England: Junior and Senior Technical Schools. The Polytechnics.

U.S.A. : The Federal Board for Vocational Education. Part-time and Full-time Vocational Schools. Senior High Schools. Technical Colleges.

India: The literary and non-practical character of Indian Education. Hartog Committee recommendations. Need for and problems of Vocational Education.

(viii) Women's Education—

A brief survey of the development of educational facilities for women in England and U.S.A. together with the special features of women's education in those countries.

India: Problems of women's education. Modern Ideals of Indian Womanhood. The problem of co-education, aim, organisation, curriculum and present tendencies in women's education.

(ix) Training of Teachers—

England: Importance given to Teacher Training. The Training Colleges and the University Training Departments. Refresher Courses.

U.S.A. : The Normal Schools and the Training Colleges of Universities. Summer courses.

India: The undergraduate and graduate training. Nature and period of training.

(x) Adult Education—

Aim, contents, methods and organisation of Adult Schools in England and U.S.A. The problem in India with special reference to methods of rapid literacy and propaganda regarding the value of education. Social and liberal nature of adult education.

(xi) Study of certain special features and problems to be prescribed year to year—

(1940-41 and 1941-42: Folk High Schools of Denmark.

1942-43: The Problem of Vocational Education in India. The "Report on Vocational Education in India" by Abbot and Wood is recommended for study.)

Book for Study

1. Kandel, I. L.: *Studies in Comparative Education.*

Books for Consultation

1. Mayhew, A.: *The Education of India.*
2. *Hartog Committee Report.*
3. *Year-books of the International Institute*, Columbia University.
4. Roman, F. W.: *New Education in Europe.*
5. Begtrup, Lund and Manniche: *The Folk High Schools of Denmark.*
6. *Year-books of Education* (Lond.).
7. Anderson: *Progress of Education in India*, 1927-32, Tenth Quinquennial Review.
8. *The Quinquennial Reviews of Mysore.*
9. *The Decennial Survey of Mysore.*

*(5) School Organisation and Management**A. The Social Aspect of School Life—*

The social life of the school. The problem of school discipline. Government and management of social life in school. Organisation and management of extra-curricular activities. Civic and moral instruction as a means of social adjustment. The problems of religious instruction. Sex education as a factor in social adjustment. Extraneous motives to conduct—Reward and Punishment.

B. The Intellectual Aspect of School Life—

Classification and promotion of pupils. Co-education of boys and girls. Daily programmes of work. Appraisalment of work. School records and reports.

C. The Health Aspect of School Life—

Health Instruction. Physical education. Healthful school conditions—school building, equipment, etc. Health service and supervision.

D. General—

The headmaster and teacher in relation to school organisation and management. School inspection and direction. The school, the home and the community.

Books for Study

1. M. S. Mohiyuddin and M. Siddalingaiya: *School Organisation and Management.*
2. Douglas, H. R.: *Organisation and Administration of Secondary Schools.*
3. Lyster, R. A.: *The Hygiene of the School.*
4. Harris, P. E.: *Changing Conceptions of School-Discipline.*

Books for Reference

1. Otto, H. J.: *Elementary School Organisation and Administration*.
2. Sears, J. B.: *Class-room Organisation and Control*.
3. Ryburn, W. M.: *Suggestions for the Organisation of Schools in India*.
4. Jonson, F. W.: *Administration and Supervision of the High School*.
5. Marshall, F. J. C., and Rees, W. R.: *Physical Education in Boys' Schools*.
6. Board of Education: *Handbook of Suggestions for Teachers* (revised edition).
7. Dewey, J.: *Moral Principles in Education*.
8. Ballard, P. B.: *The Changing School*.
9. Association for Education in Citizenship: *Education for Citizenship in Secondary Schools*.
10. Bigelow, M. A.: *Sex Education*.

SCHEME OF EXAMINATION

[Vide Ordinance 128 (f)]

	Max. Marks
<i>Group A: Theory—</i>	
(i) Principles	150
(ii) Educational Psychology including Mental and Educational Measurements	150
(iii) Methods	150
(iv) Comparative study of Educational Systems with special reference to Problems of Indian Education	150
(v) School Organisation and Management ..	150
TOTAL ..	750
Class Records in Mental and Educational Measurements	50
TOTAL, GROUP A ..	800
<i>Group B: Practice in Teaching—</i>	
Examination	140
Class Work	60
TOTAL, GROUP B ..	200

Note.—No separate minimum will be required in respect of class records in Mental and Educational Measurements, the marks in which will count towards the aggregate of Group A.

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide Ordinances 94 and 95*]**B.E. Degree Examination**

CONDITIONS OF ADMISSION*

[*Vide Ordinances 13 and 96*]

COURSES OF STUDY (GENERAL)

[*Vide Ordinances 97 to *99*]

COURSES OF STUDY (DETAILED)

[*Vide Ordinance 217 (g)*]**First Examination in Engineering***Mathematics*

Algebra.—Binomial, exponential, logarithmic and connected series. Elementary summation of series. Theory of equations. Relation* between roots and coefficients. Transformation of equations. Binomial and reciprocal equations. Location of roots. Numerical solution. Solution by graphs.

Trigonometry.—De Moivre's Theorem and its applications.

Analytical Geometry.—Pairs of straight lines, circle, parabola, ellipse and hyperbola referred to rectangular axes. Polar co-ordinates. Position of a point in space. Direction cosines. Equations of a plane and straight line.

Elements of Differential and Integral Calculus.—Limits. Rules for differentiation. Standard forms. Derivative as a rate measurer. Geometrical and mechanical applications. Maxima and minima. Integration: Standard forms. Definite integrals. Integral as an area. Volumes of revolution (simple cases). Simpson's formulæ.

Engineering Physics

Magnetism.—Terrestrial magnetism. Magnetic maps. Mariner's Compass.

Electricity.—Charge, potential and capacity. Discharge of a condenser. Di-electric coefficient and its measurement for

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solid di-electrics. Thermal effects of the electric current. Electric power and its measurement. Electric furnaces. Electric welding. Arc lamps and incandescent lamps. Efficiency. Resistance thermometer. Electrolysis. Primary cells. Magnetic effects of current. Field associated with current in a straight wire, circular coil and a solenoidal coil. Force on current in a magnetic field. Action of a moving coil galvanometer. Ballistic galvanometer. Electro-magnetic induction. Measurement of magnetic field strength. Magneto. D.C. dynamo and motor. Induction coil. Thermionic valve. Characteristic curves. Valves used as rectifiers and amplifiers. Photo-electric cells and simple applications.

Heat.—Calorimetry. Specific heats. Latent heats. Heats of combustion. Specific heats of gases at constant pressure and at constant volumes. Change of state: Solid to liquid; Liquid to vapour. Vapour pressure and its measurement. Critical state. Liquefaction of gases. Hygrometry. Isothermals and adiabatics. Adiabatic relations for a gas. Measurement of ratio of the two specific heats of a gas. First and second laws of thermodynamics. Heat engines. Absolute scale of temperature. Its relation to the gas scale. Entropy. Conduction of heat. Measurement of K for good and bad solid conductors. Practical applications.

Light.—Dispersion. Achromatism of lenses. Direct vision spectroscope. Optical instruments: telescopes, microscopes and eye pieces. Elements of photometry.

Acoustics.—Velocity of sound and its measurement. Musical sounds. Pitch, intensity and quality. Resonance. Sharpness of resonance. Practical applications. Reflection of sound. Echo. Interference. Interference phenomena in sound. Absorption of sound. Measurements of absorption coefficients for different substances used in buildings.

Acoustic of Auditoria—(a) Time of reverberation. Sabine's formula. (b) Optimum time of reverberation for different cases. (c) Calculations for reducing reverberation.

Noise and its insulation. Calculations for buildings.

Practical Course.—Magnetic field study. Resistance thermometry. Wheatstone's bridge. Potentiometer. Heating effects of currents. Electrolysis. Electro-magnetic induction experiments. Measurement of di-electric coefficient of a slab. Thermal conductivity (Searle's method for metals and Lees' method for bad conductors). Mechanical equivalent of heat. Regnault's calorimeter. Berthelot's spiral for latent heat. Vapour pressure measurement. C_p/C_v by Clement and Desorme's method. Dispersive power of prisms. Sonometer. Measurement of frequency. Velocity of sound—Resonance column and Kundt's tube. Resonance bottle

Engineering Chemistry

Metals.—Study of the following metals and their alloys from the engineer's view-point: copper, zinc, mercury, aluminium, tin, lead, chromium, tungsten, manganese, iron and nickel.

Technology of Water.—Impurities in water and their removal. Temporary and permanent hardness. Production of scale, corrosion and foaming. Softening. Base exchange process. Treatment of water for town-supply and for industrial purposes. Boiler compounds. Action of water on lead pipes. Elements of water analysis.

Fuels.—Solid Fuels—Wood, charcoal, coal and coke. Their composition. Proximate analysis of coal.

Liquid Fuels—Crude oil and petroleum products. Synthetic liquid fuels. Berginization coal. Elements of analysis of liquid fuels.

Gaseous fuels—Gaseous fuels from coal and coke. Blast furnace gas. Chemical analysis of gaseous fuels.

Refractory Materials.—Acid, basic and neutral refractory materials and their use in furnace practice.

Plasters and Limes.—Plaster of Paris. Chemical analysis of limes. Theories of setting of plasters and mortars.

Portland Cement.—Composition and chemical analysis of cements. Theories of setting of cements. Factors affecting the setting. Corrosion of concrete and reinforced concrete and its prevention.

Grinding Materials.—Carborundum, emery and other abrasives in common use. General properties and uses of abrasives.

Paints and Varnishes.—General properties of pigments. Vehicles for paints and varnishes.

Lubricants.—Theory of lubrication. Common lubricants. Testing of lubricants.

Elements of Physical Chemistry.—Osmotic phenomenon. Theory of electrolytic dissociation treated in an elementary manner. Electromotive force of cells. Electro-plating and electro-refining of metals.

Corrosion of metals and its prevention. Anti-corrosive paints, enamelling, tin-plating and galvanising. Corrosive action of lubricants.

Colloids.—Fundamentals of Colloid Chemistry. Adsorption. Coagulation by electrolytes. Colloidal properties of clay.

Practical Chemistry.—Systematic qualitative analysis of inorganic substances.

Volumetric analysis. Acidimetry and alkalimetry. Determination of hardness of water. Estimation of chloride, calcium and iron. Simple titrations involving the use of permanganate, dichromate and thiosulphate.

Gravimetric estimation of silica, alumina and the sulphate radical.

Economics

Principles of economics and outlines of economic theory with reference to their applications in modern business, trade, commerce and industry.

The ideas of economics and the methods by which they are studied. Relation of economic science to practice. The meaning of economic law. Demand and consumption. The law of diminishing utility. The factors in production and their combination. Labour and natural agents. Increasing and decreasing returns. Capital, its influence and the conditions of its accumulation. Value in relation to riches, price and utility and cost of production. Determinants of ratios of exchange. The elements of cost. Complex problems of value. The theory of international trade. Relation of international trade to home trade. The Law of rent. Interests and profits. Causes of the rates of wages. General theory of the value of money. The value of foreign bills. Principles of taxation.

Building Materials

Stones.—Structure, classification of characteristic qualities of Indian and European building stones. Artificial stones. Quarrying and blasting. Preparation and use. Dressing stone. Implements.

Bricks and Tiles.—Brick and tile earths. Preparation of bricks and tiles by ordinary methods and by use of machinery. Burning in clamps and kilns. Hoffman's Kiln. Improved types of kilns. Characteristics of good bricks. Earthen and stone-ware products. Terracotta, etc.

Limes, Cements, Sand and Surki Mortars.—Source of supply, properties, preparation and use. Ordinary and hydraulic mortars. Portland cement, its manufacture and use. Practical tests of limes and cements. Composition, mixing and laying of concrete (plain and reinforced). Plastering, pointing and white-wash, bitumen. Gypsum and Plaster of Paris.

Timber.—Growth and felling. Natural and artificial seasoning. Conversion and preservation of timber. Defects in timber. Destructive agents and decay of timber. Characteristics of good timber. Principal uses. Important varieties in use in India, Timbers suitable for special purposes.

Preservation and Preservative Coating of Materials.—Distemper, oil paint, colour wash, paints, varnishes and miscellaneous materials as papering, putty, glazing, etc. Composition, preparation and use.

Definition of Terms used in a Building.—Foundation, plinth, basement, floor, superstructure, parapet wall, arches, piers, pillars, pilasters and balustrade.

Metallurgy and Elementary Mechanical Engineering

(a) Metallurgy

Pig Iron.—Manufacture, composition and uses.

Cast Iron.—Composition of several kinds of cast iron and their physical properties. Effect of impurities in cast iron.

Mild Steel.—Manufacture by Bessemer, open hearth, electric and duplex processes. Characteristics and uses.

Wrought Iron.—Manufacture, properties and uses.

Special Steels.—Effect of nickel, chromium, silicon, manganese and carbon on steels.

Other Metals.—Strength and properties of copper, lead, brass, zinc and their alloys.

Heat Treatment of Metals.—Solid solutions, hardening, annealing, tempering and welding of metals.

(b) Mechanical Engineering.

Design of Simple Machine Parts.—Strength and proportions of rivets and riveted joints, bolts and nuts, pipes and pipe joints, keys and cotters.

Transmission of Power.—Velocity ratio in friction and simple toothed gears. Simple, compound and epicyclic train. Bevel and worm gears. Velocity ratio in belt and rope gearing. Simple types of couplings, bearings, hangers and wall brackets.

Drawing

(a) Free-hand and Model Drawing

Neat and accurate copies of plates containing simple curves to a larger or smaller scale without any mechanical aids. Application of elementary principles of perspective to model drawing of simple objects. Drawing of objects of simple form as they appear to the eye from any point of view.

(b) Isometric and Perspective Drawing

Construction of Isometric Scale. Isometric projection of simple objects. Rules and definitions of elementary perspective drawing.

Linear and angular perspective projections. Perspective representation of geometrical solids and simple objects in any given position with reference to the ground and picture planes.

(c) Practical Solid Geometry and Geometrical Drawing

Plane Geometry.—Use of drawing instruments. Lettering and conventions used in drawing.

Construction and use of plain scales, proportional scales, diagonal scales, scale of chords and vernier scales.

Ellipse, parabola, hyperbola, cycloidal curves, involute of a circle, spiral and helix and their chief properties.

Solid Geometry.—Projection of points, lines and planes. Projection of simple solids such as prisms, pyramids, cylinders and cones with varying positions and with alterations of the ground line. Sections of solids.

Interpenetration of solids. Intersection of two cylinders, a cylinder and a cone, a prism and a pyramid, and a prism and a cone. Development of plane and curved surfaces.

Surveying—Theory and Practice

(a) Theory

Chain Surveying.—Units of measurements. Measuring instruments, cross staff, optical square, line ranger, etc. Their use and adjustments. Arrangement of surveying lines. Running of survey lines. Field operations, notes and records. Errors and how to minimise them. Problems. Plotting and finishing of plans from field records.

Compass Surveying.—The main feature of the survey. Construction of the Surveyor's and Prismatic Compasses. Testing and adjusting the instruments. Use of the compass in conducting surveys. Traversing. Advantages and limitation of the compass. Booking of field work. Plotting of a survey plan. Problems.

Plane Table Surveying.—Principles involved. The instrument. Field work. Several methods of conducting the survey. Standard problems. Errors in field work. Remedies and precautionary measures adopted. Accuracy to be obtained in topographic surveys.

Pentameter and its uses.

(b) Practice

Each student will be given practical training in the field regarding the handling of all the instruments and conducting the above surveys. Each student is expected to prepare and submit notes and drawings relating to the practical work done by him.

Workshop Practice

(Any two out of the following shops for Mechanical and Electrical students. Fitting and Carpentry shops for Civil Engineering students.)

(i) *Fitting*.—Chipping, filing, scraping, groove cutting and key fitting, screwing and tapping. Use of scribing block, surface gauge and square in making out work.

(ii) *Carpentry*.—Sawing, chipping and planing. Mortice, tenon and dovetail joints.

(iii) *Smithy*.—Sledge hammer practice. Drawing out tapers. Bending at right angles. Making links. Forging of key, bolt, nut and simple parts. Welding rods and rings.

(iv) *Foundry*.—Levelling. Moulding simple objects with or without patterns. Moulding by turning-over method. Core making. Machine moulding. Casting.

Second Examination in Engineering**COMMON TO ALL BRANCHES***Pure Mathematics*

1. *Differentiation*.—Successive differentiation and Leibnitz's theorem. Geometrical application to tangents, normals, inflection and curvature. Partial differentiation. Rolle's theorem and Taylor's theorem. Maxima and minima. Indeterminate forms.

2. *Integration*.—Various methods. Reduction formulæ for standard algebraic and trigonometric integrals. Theorem of definite integrals in one, two and three dimensions.

3. *Applications*.—

(a) Curve tracing. Singular points. Asymptotes. Evolutes. Involute.

(b) Determination of areas and volumes.

(c) Expansion of functions. Taylor's series and Fourier's series.

4. *Differential Equations*.—Equations of the first order; Homogeneous equations; Linear equations; Clairaut's form; Linear equations with constant coefficients; Homogeneous linear equations; Simple linear equations of the second order.

Applied Mathematics

1. *Kinematics*.—Composition and resolution of vectors. Relative velocities. Angular velocity and acceleration. Kinematics of a rigid body. Instantaneous centre and Eulerian co-ordinates.

2. (a) *Newton's Laws of Motion*.—Application to simple cases. Work, power and energy.

(b) Motion of a particle in one dimension. Simple harmonic motion and simple pendulum. Other simple cases.

(c) Motion of a particle in two dimensions. Projectiles. Constrained motion. Central forces. Kepler's Laws.

3. *Dynamics of Rigid Bodies*.—Moments of inertia. D'Alembert's principle. Rotation about a fixed axis. Motion of a rigid body in two dimensions. Motion about a point.

4. *Statics*.—Moments, couples, equilibrium of forces in a plane. Examples involving friction. Centre of gravity. Principle of virtual work. Stable and unstable equilibrium. Equilibrium of strings and chains. Forces in three dimensions. Conditions of equilibrium.

5. *Hydrostatics*.—General theorems relating to pressure. Thrust on a plane area. Centre of pressure. Resultant thrust on any surface. Equilibrium of floating bodies.

Applied Mechanics and Graphic Statics

(a) Strength of Materials

Simple Stresses and Strains.—Modulus of elasticity, permanent set, elastic limit, yield point, ultimate strength, resilience and fatigue of metal. Modulus or rigidity. Bulk modulus. Effects of temperature changes.

Dead and Live Loads.—Working stresses and factors of safety. Launhart and Weyrauch's formula, the dynamic and other formulæ and results of experiments. Effect of impact. Stresses due to suddenly applied loads. Resilience.

Compound Stresses and Strains.—Ellipse of stress. Principal planes and principal stresses. Moments of inertia and radius of gyration. Analytical and graphical methods.

(b) Theory of Structures

Theory of Simple Bending.—Transverse stress in beams, girders, and cantilevers. Graphic and analytical methods of calculating bending moments and shearing forces and stresses in individual members of the frame work of structures loaded at the joints, both for steady and moving loads. Graphical methods of drawing bending movements and shear force diagrams for a travelling load system by Claxton Fidler and other graphical methods. Influence lines and their application to bending.

Moment of Resistance.—Strength and stiffness of beams. Modulus of rupture. Beams of uniform resistance.

Shear distribution in cross section of a beam. Graphical methods. Stress distribution in combinations of materials.

Deflection.—Relationship between curves of loading, shear force. Bending moment, slope, curvature and deflection. Analytical and graphic methods of determining the deflection of various cases of loading and supports. Mohr's theorem.

Fixed and Continuous Beams.—Analytical and graphical methods of determining bending moments and shearing forces. Encastre beams and continuous beams. Theorem of three moments.

Design of Struts and Columns.—Use of standard formulae such as Euler's, Rankine's, Gordon's, Fidler's, Johnson's and straight line formulæ in the design of struts. Curves showing comparatively the strength of struts obtained by various formulæ. Choice of sections, joints, design of end bearings and methods of supporting or fastening the ends of struts and stanchions.

Design of Pin Connected and Riveted Joint.—Methods of failure, efficiency and practical considerations in design.

Theory of Torsion.—Strength of shafting.

Springs.—Spiral, volute and carriage springs.

Stresses in thin and thick cylinders.

Miscellaneous Structures.—Stability of masonry and brick-work structures such as dams, weirs and retaining walls. Stresses due to weight of structures and wind pressure.

Principles of Graphic Statics.—Graphical methods of dealing with forces and reactions. General principles of force and equilibrium polygons for determining stresses in simple trussed or fabricated structures.

Rotor and vector quantities. The triangle and parallelogram of forces. The vector polygon. Funicular polygon. Bow's notation. Conditions of equilibrium of concurrent and non-concurrent forces. Definition of a structure. Simple and compound structures. Perfect, imperfect and redundant frames with examples.

Graphical methods for determining moment, centroid and momental ellipse. Graphical solutions of bending moments and shear diagrams. Solution of stresses in framed structures by (i) Clerk-Maxwell's reciprocal figure method, (ii) Ritter's method of sections or moments, and (iii) Resolution.

Frames of different kinds of roofs under different conditions of loading. Stresses in individual members of simple roof trusses, frames and girders. Derric, Tripod, King Post, Queen Post and French roof truss. Station roof truss. Crescent roof. Three-pinned arch. North light roof truss. Bollman and Fink roof trusses. Effect of fixing of ends.

Warren N. Girder, Pratt, Hogback N. Girder, Whipple
Murphy Truss—Bow String Girder; Dead load stresses on bridge
trusses and girders.

Hydraulics

Hydrokinetics.—The flow of a fluid. Modes of motion of water. Total energy of flowing water. Bernoulli's theorem. Venturimeter. Vortex motion.

Discharge from Orifices and Mouth-Pieces.—Flow through small orifices. Coefficients. Measurement of water. Application of Bernoulli's theorem to flow from orifices. External and internal mouth-pieces. Large vertical orifices. Partially submerged and drowned orifices. Losses of head in flowing water. Sudden enlargement, contraction and obstructions. Time of emptying vessels through orifices.

Notches and Weirs.—Rectangular, triangular and trapezoidal notches. Velocity of approach. Drowned and broad-crested weirs. Afflux and backwater. Researches of Francis and Bazin. Principle of similarity. Separating weirs. Time of emptying reservoirs by weirs. Flood absorptive capacity of tanks. Practical cases of discharge from orifices and notches: anicuts, tank weirs, tank and canal sluices, bridge openings and canal locks. Discharge from irregular basins.

Flow through Pipes.—General laws. Froude's experiments. Hydraulic gradient and hydraulic mean radius. Loss of head due to friction and other causes. Impacts at bends and thrust blocks. Chezy's formula and Darcy's coefficients. Reynold's experiments and critical velocity. Flow through long and short pipes. Inlet resistance. Syphon.

Kutter's formula. Defects of Chezy's formula. Box's formula.

Hydraulic gradient in pipes of variable diameter. Pipes connecting two reservoirs and delivering water *en route*. Parallel flow through pipes. Pipes not running full. Dupuit's equation. Water hammer. Nozzles.

Flow in Channels.—Uniform and steady flow in channels of constant slope and section. Velocity of flow. Surface fall. Formulæ of Chezy, Darcy, Ganguilet, Kutter and Bazin and their application. Formulæ to be adopted for channels in practical design. Rectangular, trapezoidal and circular channels. Economic sections. Channels for variable discharge. Egg-shaped and ovoid conduits.

Parabola of discharge, the points of maximum and minimum velocity in a section. Vertical and transverse velocity curves. Ratios of mean, surface and bottom velocities. Minor losses of head at entry and bends. Standing waves.

Discharge in Rivers.—Characteristics of river flow. Estimation of river discharges. Various methods and their comparative merits. Direct methods of measuring velocity. Principles involved. Description of methods. Surface and other floats and velocity rods. Current meters. Price and other meters. Rating of meters. Curves and contours of equal velocities. Pitot tube. Hydrodynamometer. Gauging streams by chemical means. Rainfall and run-off calculations for maximum discharge from catchment. River bends and regime of rivers.

Applied Mechanics Laboratory

Tests on mild steel, cast iron, brass, copper, gunmetal, wood, etc., for tension, compression, shear and torsion. Determination of strength and elastic constants. Use of extensometer and autographic recorder. Tests for fatigue of materials. Bending, hardness and impact tests. Testing of long and short columns. Tension and torsion tests of wire, rope and chain.

CIVIL ENGINEERING BRANCH

Mechanical Engineering

Géneral.—I.H.P. ; B.H.P. ; Mechanical efficiency.

Fuel.—Types of fuel: solid, liquid and gaseous. Their advantages and disadvantages.

Boilers.—Important types of boilers. Lancashire, Cornish, water tube and smoke tube boilers. Oil firing of boilers.

Simple Thermodynamics.—Properties of gases and steam. Entropy and entropy diagram. Carnot's cycle and Rankine cycle.

Internal Combustion Engines.—Principles of operation and maintenance of gas, oil and petrol engines.

Steam Engines.—Operation and care of road rollers, portable engines, simple and compound engines, turbines, and pumps. Types of condensers.

Hydraulic Appliances.—(a) *Pumps.*—General description and methods of working reciprocating, centrifugal and deep well pumps. Their merits and simple calculation of power consumption. Pulsometer pumps and hydraulic rams.

(b) *Prime Movers.*—Description and uses of important types of water wheels and turbines. Their merits.

(c) Simple hydraulic machines like jack, press, crane accumulator and intensifier.

Lifting Machinery.—Hoists, cranes and winches.

Elementary principles of hydro-electric development.

Engineering Laboratory.—Use of indicator. Determination of horse power. Use of friction brakes. Use of different types of calorimeters. Standard tests on gas and oil engines and the more common steam and hydraulic machinery.

Electrical Engineering

Units.—C. G. S. and practical electro-magnetic units. Ohm's and Kirchhoff's laws and their applications in solving simple electric circuits.

Magnetism.—Magnetic force and magnetic induction. Permeability. Hysteresis. Magnetic field. Magnetic circuit. Methods of making magnets. Electro-magnetic induction.

Measurement and Measuring Instruments.—Conductors (metals and alloys) and insulators. Measurement of resistance by Wheatstone's bridge, voltmeter, ammeter and ohmmeter. Principle of the potentiometer. Elementary principles of moving coil, moving iron and dynamometer instruments and their use as ammeters, voltmeters and wattmeters. Elementary principles of energy meters.

D. C. Machines.—Elementary principles and construction of series, shunt and compound wound generator and motors. Their characteristics, regulation and control.

Alternating Currents.—Virtual values and vector representation of alternating currents and voltages. Calculation of simple A. C. circuits. Power in A. C. circuits. Simple measurements of capacity, inductance and power.

A. C. Machines.—Elementary principles and characteristics of synchronous generator and motor, transformer and induction motor.

Accumulators.—Lead and nickel storage batteries. Chemical action, voltage and capacity. Charge and discharge curves.

Illumination.—Candle power, lumen and foot-candle. Simple characteristics of arc, incandescent and luminous discharge lamps. Standards of illumination required for various purposes.

Principles of internal wiring of buildings and simple overhead distribution. Lightning Conductors. Elementary principles of electric fans and heating appliances.

Practical.—Characteristics of fuses. Measurement of resistance by Wheatstone's bridge, voltmeter and ammeter and megger. Measurement of voltage, current and power in simple D. C. and A. C. circuits. Energy meters. Characteristics of D. C. generators. Starting, speed regulation, reversing and determination of characteristics of D. C. motors. Measurement of inductance and capacity by voltmeter and ammeter. Simple transformer tests. Starting, reversing and speed regulation of induction motor. Study of fan motors.

Workshop Theory

Carpentry Tools.—Hand tools for cutting wood. Axe, adze, chisel, gouge, draw knife, spokeshave, jackplane, smoothing plane, moulding plane, wood scraper, saws.

Boring Tools.—Brad-awl, gimlet, auger, brace.

Wood Working Machine.

Fitter's Tools.—Cold and hot chisel, hammer and file. Scraping. Use of surface gauge, scribing block, etc.

Tapping and Screwing.—Standard threads, pipe threads and gas threads. Tapping. Dieing. Details of taps and dies. Using them on steel, cast iron, brass, etc. Drifts. Reamers.

Fitting Appurtenances.—Spanners, Chain or pipe wrench, pipe vice, clamp, etc. Screw jack and vice.

Workshop Practice

Smithy.—Drawing out tapers. Bending at right angles. Bending chain links. Making keys, bolts and nuts. Lap and ring welding.

Foundry.—Levelling. Moulding simple objects with or without pattern. Moulding strait pipes and elbows. Core making.

Machine Shop.—Plane turning. Groove cutting. Cutting square thread. .

Machine Drawing

Riveted Joints.—As used in the construction of steel trusses, steel tanks, bridge work, etc.

Pipe Joints.—Flange joints, expansion joints, spigot and socket joints, Macnaughtan's joints, Armstrong's hydraulic pipe joints, etc.

Cottered Joints.—For tension and compression rods.

Foundation Bolts.—Rag bolts, Lewis bolts, cottered bolts, etc.

Bearings, Stuffing Boxes, Valves, etc.—As used in pumping machinery.

Building Construction

Foundations.—Good and bad foundations. Safe bearing power of soils ordinarily met with. Masonry footings and ordinary mass concrete foundations. Foundations for heavy machinery and electric motors. Holding down bolts and anchor plates. Vibration, its cause and effects. Isolating heavy machinery.

Natural and artificial foundations. Piles and pile driving. Friction and bearing piles. Wells and tubular foundations. Reinforced concrete rafts and substructure.

Plinth, Basement, Floor.—Vertical and horizontal damp proof courses. Dry area to basement. Cavity and hollow walls.

Brick Work.—Terms and bonds in brick work. Closers, bedding, racking back, plastering, pointing, coping, cornice, blocking course, parapet, corbel, reveal, sill and hollow walls. Reinforced brick work. Erection of brick chimneys. Scaffolding Derrick. Gantry. Retaining walls.

Piers and pilasters. Diagonal and herring-bone bond. Fire-place and flue. Moulded, plain and gauged brick work.

Stone Masonry.—Safe load. Uncoursed and coursed rubble and ashlar work. Bonds. Lewis, Dowel and Cramp joints. Template. Shears. Dressing such as window sills, window and door jambs and reveals. Sinking of wells. Masonry lining for wells.

Coping, throating and cornice. Quoin. Squint quoin. Pointing.

Plastering.—Materials. Plaster grounds. Plastering mixtures: stucco, plain and rough cast.

Hard, smooth, shell lime and gypsum plasters. Wood and metal laths. Cornices and mouldings. Fibrous plaster and ornamental plaster.

Wood Work.—Teak wood wrought and put up. Joints such as halving, lapping, notching, as applied to wall plates, floors, ceilings, partitions, screens and posts.

Roof Frames.—Couple rafters. King and Queen post trusses. Purlins, valleys and ridges, hips, gables and eaves. Simple iron frames.

Roof frames for long spans. Girder and arch frames. French and English system of bracing.

Doors and Windows.—Ledged, braced, framed, battened, planked, panelled and glazed. Framing and hanging.

Panelling, moulding and veneering. Double doors, swing doors, door jamb linings, ventilators and fanlights. Architraves, skirtings and picture rails. Sash and casement windows. Skylights and lanterns.

Hardware.—Varieties of hinges, bolts and locks. Finger and name plates.

Construction in Metal.—Rolled steel sections, sizes of rolled steel joists and girders and simple appliances.

Wrought and cast iron ornamental work, grillage and iron gates. Cast iron columns, pressed metal ceilings, and cornices. Steel castings and bronze work. Structural shapes, built up stanchions, struts and girders.

Staircase.—Plain, dog-legged and newel staircases.

Wooden, stone, metal and reinforced concrete staircases. Cut and close strings, hand rails, balusters and newels.

Roofs.—Varieties of tiles. Pan and Mangalore tiles. Sloping and flat roofs. Thatched and country roofs. Slate and reinforced concrete roofs. Jack arches and Madras terraces. Saw-tooth roofs.

Arches and Arch Work.—Definitions of terms used in arch-work. Gauged, relieving and inverted arches. Centring and timbering. Segmental and elliptical arches. Domes and vaults. Buttresses and abutments.

Flooring.—Plaster, tile, Cudapah and burnt stone slab flooring. Cement and granolithic floors. Wood block, board and parquet flooring.

Glazing.—Varieties of glass. Door and window glazing. Roof glazing. Pavement lights and decorative glass. Lanterns and domes. Putty glazing. Lead and glazing bars.

External Plumbing.—Lead work or zinc sheets in valleys, flats and flashings, gutters and dormer windows. Drip moulding.

Painting and Decoration.—Oil painting and varnishing. Enamel painting. Calcarium and distemper wash. Wall papering and stencilling.

Reinforced Concrete Construction.—Nature, use, properties, advantages and disadvantages over other methods of construction. Practical use of reinforced concrete work in beams, floors, columns, water and oil tanks.

Fire Proof Construction.—Reinforced concrete, hollow block and bulk timber construction.

Design of Building.—Principles of economic design of residential and public buildings and factories with special reference to selection of site, construction of walls, damp proof courses, water supply, drainage, ventilation and lighting.

Architecture

(a) Principles of Architecture

Introductory.—Aim and importance of architecture. Independence of thought, its essential feature. The methods of study. The advantage of the historical method. Architecture as a fine art. The technic, æsthetic and phonetic arts. The varying proportions necessary for perfection in every fine art. The place of architecture among the fine arts.

Principles.—(1) Convenience of general arrangements, (2) Beauty, and (3) Truth.

Qualities.—(1) Strength: stability and durability, (2) Vitality, (3) Restraint, (4) Refinement, (5) Repose, (6) Grace, (7) Unity of conception, (8) Breadth, (9) Scale, (10) Pictorial setting, and (11) Expression of purpose.

Factors.—(1) Mass, (2) Form, (3) Proportion, (4) Decorative ornament, (5) Light and Shade, (6) Decorative colour, (7) Solids and voids, (8) Uniformity, (9) Balance and symmetry, (10) Materials, (11) Construction, and (12) Sculpture and painting.

Influences of association, tradition, climate, topography, religion and social customs and aspirations of the time.

Classic Orders and their details.

(b) Development of Architecture

Architecture, a record of man's effort to beautify his surroundings, materials and structural shapes.

Historic style corresponds to contemporary civilisation. Pre-historic dwellings. Caves and log cabins.

Historic Styles in the East.—(1) Buddhistic—Stupas, Chaityas and caves.

(2) Dravidian—Rath, temples, cars and palaces.

(3) Chalukyan—Mantapams, quadrangles and pavilions.

(4) Jain—Hill temples, pillars, towers of victory, porches.

(5) Indo-Aryan—Rock temples, golden temples, palaces, river ghats.

(6) Pathan Style—Tombs and mosques.

(7) Indo-Saracenic and Moghul—Gateways, masjids, mosques, tombs and palaces.

(8) Chinese and Japanese—Temples, pagodas, tombs, porcelain tower and pavilions.

(9) Modern Indian Architecture—Bikanir, Jaipur, Jodhpur.

Historic Styles in the West.—(1) Egyptian—Tombs, temples, pylons and obelisks.

(2) Assyrian, Persian and Sassanian—Halls and palaces.

(3) Greek—Temples, tombs, gateways, towers and amphitheatres.

(4) Roman—Forum or market place, temples, basilicas, law courts, stock exchange, public baths, theatres, amphitheatres, triumphal arches, columns of victory, aqueducts and bridges.

(5) Early Christian—Baptistries, churches and tombs.

(6) Byzantine—Churches and halls.

(7) Romanesque—Vaulted halls, bell towers or campaniles, cloisters.

(8) Gothic (Mediaeval and Flamboyant)—Cathedrals, parish churches, castles and chateaux, military fortresses, civic and college buildings, palaces, city gates.

(9) Renaissance (Classic and Rococo)—Italian, German, French and English palaces, churches and libraries.

(10) Modern and Classic Ideal—Civic, secular, religious and business premises, theatres, operas, museums and university buildings.

(c) Elements of Composition

General Principles of Composition.—Proportion as resulting from construction. Requirements of programme. Location and environment. Geometrical theory of proportion.

Essentials of Programme in General.—Requirements of space, site, local influences and style. Importance of proper indication on a sketch.

Ornaments and treatment of masses and surfaces for different materials including reinforced concrete.

Building Drawing and Estimating

Preparing drawings accurately to scale with additional views and sections from measurements of actual buildings and from given sketches. Making proportionate sketches of works. Designing and drawing small buildings in full to conform to given accommodation or at specified cost. Making out large scale drawings of building parts.

Estimating.—Taking out quantities with costs from drawings of buildings. Calculating and writing out of cost. Preparing specifications and data of materials and labour for the items of works required for buildings.

Geology

General Geology.—General principles of dynamical geology in relation to earth sculpture. Action of air as a dynamical agent. Action of surface waters, including rivers, lakes and seas. Underground water, its circulation and geological action. Artesian wells. Landslides, their causes and effects. Glacial deposits, their origin and structures. Volcanoes and earthquakes.

Petrology.—Description and identification of the common rock-forming minerals. Classification into igneous, sedimentary and metamorphic rocks. The leading types in each group, their description and identification. Physical properties of rocks, such as durability, toughness, porosity, thermal conductivity, etc. Alteration and weathering of rocks. Formation of clays. Factors which determine the suitability of rocks as building stones. Building, ornamental and decorative stones of India, with special reference to Mysore.

Structural Geology.—The leading structures of rock masses and their importance in geological processes. Quarrying of rocks. Geological structure in relation to problems for dams, reservoirs, tunnels, shafts, etc. Construction and interpretation of geological maps and section drawing.

Practical.—Identification of minerals from a study of their physical characters, such as habit, cleavage, lustre, hardness, etc.

Description and identification of the chief types of igneous, sedimentary and metamorphic rocks, with special reference to their alteration and weathering. Use of the petrological microscope.

Study of geological maps with a view to interpret the underground structure of the rocks. Exercises in section drawing.

Surveying—Theory and Practice

Plane Tabling.—Tangent Clinometer. Theory and use of the stadia method of plane tabling in topographic surveys.

Levelling.—Simple, compound, check and reciprocal levelling. Hand levels and Clinometers. Varieties of levels. Comparative merits and methods of using them. Fly levels, longitudinal and cross sections. Errors in levelling. Methods of avoiding and minimising them. Permissible error. Problems in levelling.

The permanent adjustments of a level. Theory and Practice.

The Sextant and Theodolite.—Construction of Hadley's and Box Sextants and the Theodolite. Setting up of a theodolite and measurement of horizontal and vertical angles. Running and prolonging of straight lines. Uses of the Theodolite and Sextant in surveys. Conducting traverses by Gales' and other methods and plotting the results. Setting out of simple curves.

Different types of theodolites and their adjustment. Errors in theodolite work and remedies adopted.

Advanced Levelling.—Barometric and hypsometric levelling. Contours and use of contour plans in engineering projects. Use of the Level, the Clinometer, the Theodolite and Plane Table in making contour plans. Setting out of grades and use of Boning-rods.

Tacheometric Surveying.—Introductory principles. The stadia system and the constants of the tacheometer. Analytic lens. Field work and records of field work. The tangential system of surveying. Principle and use of Range Finder. Planimeter and its uses.

Practical.—Handling the above surveying instruments and conducting surveys in the field. Each student is expected to prepare and submit notes, records and drawings as evidence of field work done by him.

MECHANICAL ENGINEERING BRANCH*Building Construction*

Foundation.—Good and bad foundations. Safe bearing power of soils ordinarily met with. Masonry footings and ordinary and mass concrete foundation. Foundations for heavy machinery and electric motors. Holding down bolts and anchor plates. Vibration, its cause and effects. Isolating heavy machinery.

Brick Work Masonry.—Terms and bonds in brick work: Closers, bedding, racking-back, plastering, pointing, coping, cornice, blocking course, parapet, corbel, reveal, sill, hollow walls, reinforced brick work. Erection of brick chimneys. Scaffolding Derrick. Gantry. Retaining walls.

Stone Masonry.—Safe load. Uncoursed and coursed rubble and ashlar work. Bonds: Lewis, Dowell, Joggle, Cramp. Template. Shears Dressings, such as window sills, window and door jambs and reveals. Sinking of wells. Masonry lining for wells.

Plastering.—Materials. Plaster grounds. Plastering mixtures. Stucco, plain and rough cast.

• **Wood Work.**—Teakwood wrought and put up. Joints, such as halving, lapping, notching as applied to wall plates, floors, ceilings, partitions, screens and posts.

Roof Frames.—Couple rafters and simple King and Queen post trusses. Simple iron frames, purlins, hips, valleys, eaves, ridges and gables.

Doors and Windows.—Ledged, braced, framed, battened, planked, panelled and glazed. Framing and hanging. Venetians and louvres.

Staircase.—Plain, dog-legged and newel staircases.

Roofs.—Sloping, flat, thatched and country-roofs. Pan and Mangalore pattern tiles. Madras and jack-arched terraces and saw-tooth roof.

Arches.—Definitions of terms used in archwork; gauged, relieving and inverted arches.

Rolled Steel Sections.—Sizes of rolled steel joists and girders, and simple appliances.

Flooring.—Plaster, tile, Cudapah and burnt stone slab, cement and granolithic floors.

Reinforced Concrete Construction.—Nature, use, properties, advantages and disadvantages over other methods of construction. Practical use of reinforced concrete work in beams, floors and columns. Water and oil tanks. Fire-proof construction.

Design of Buildings.—Principles of economic design of residential and public buildings and factories with special reference to selection of site, construction of walls, damp-proof courses, water supply, drainage, ventilation and lighting.

Building Drawing and Estimating

Preparing drawings accurately to scale with additional views and sections from measurements of actual buildings and from given sketches. Making proportionate sketches of works.

Estimating.—Taking out quantities with costs from drawings of buildings. Calculating and writing out of cost.

Electrical Technology

Units.—C.G.S. and practical electric and magnetic units. Standards of current, electro-motive force and resistance.

Electric Circuits.—Conductors and insulators. Ohm's and Kirchhoff's Laws. Heating, magnetic and chemical effects of currents. Force between conductors. Conversion of energy. Back E.M.F. Electro-chemical equivalent. Thermo-E.M.F. and thermo-couples.

Magnetism.—Magnetic force and magnetic induction. Demagnetising force. Residual magnetism. Coercive force. Permeability. Action of keepers. Dynamic pull in electro-magnets. Determination of B. H. Curve and hysteresis loop. Flux meter. Bar and yoke magnetometer. Laws of hysteresis and eddy current losses. Magnetic materials. Magnetic circuit. Magnetic leakage.

Electro-magnetism.—Faraday's experiments. Lenz's Law. Self and mutual inductance. Induction coils. Rise and decay of current in inductive circuits. Charge and discharge of condenser.

Theory of Alternating Currents.—Alternating quantities. R.M.S. and mean values of simple harmonic waves. Form factor and amplitude factor. Vector diagrams. Symbolic method and vector algebra. Reactance and capacitance. Series and parallel circuits. Resonance. Power and power factor. Complex wave forms. Polyphase systems. Measurement of power in single and polyphase circuits.

Measuring Instruments and Measurements.—Principles of indicating instruments of the moving iron, moving coil, dynamometer, electro-static, hot-wire, thermo-junction and induction types. Recording instruments. Energy meters of the chemical, mercury motor and induction types. Frequency and power factor meters. Kelvin balance. Wheatstone and Kelvin bridges. Principle of simple A.C. bridge measurements. D.C. and A.C. potentiometers. Megger and bridge megger. Oscillograph. Ondograph.

Theory of Direct Current Machinery

Direct Current Machinery.—Component parts. Induced E.M.F. Armature windings. Armature reaction. Commutation. Interpoles. Performance, characteristics of shunt, series and compound-wound generators. Losses, efficiency and temperature rise. Parallel operation. Regulators. Third brush, Rosenberg, arc-welding and homo-polar generators. Turbo-generators. Boosters and balancers.

Production of torque in a motor. Performance characteristics of shunt, series and compound-wound motors. Principal applications of each type. Design of starter. Speed control. Series-parallel, multi-voltage and Ward Leonard systems of speed control.

Testing of generators and motors.

Accumulators.—Lead-acid cell. Physical and chemical changes during charge and discharge. Formation of Plante and Faure plates. Installation and maintenance of batteries. Charging equipment. End cells. Sulphation. Care of idle battery. Capacity, efficiency and cadmium tests. Testing of acid and distilled water.

Alkaline Cells.—Theory, performance and application of Edison and Drumm cells. Comparison with acid cells.

Illumination.—Units. Incandescent, arc and gaseous discharge lamps. Their characteristics and efficiencies. Standards. Photometry. Types of photometers.

Distribution.—Internal wiring of buildings. Elementary principles of transmission and distribution. Comparison of different systems. Simple overhead lines. Cables. Electrical equipment in factories. Switchgear in small power stations.

Surveying—Theory and Practice

Levelling.—Simple, compound, check and reciprocal levelling. Hand levels and clinometers. Varieties of levels. Comparative merits and the methods of using them. Fly levels, longitudinal and cross sections. Errors in levelling. Methods of avoiding and minimising them. Permissible error. Problems in levelling.

The permanent adjustment of a level. Theory and practice.

The theodolite.—Construction of the theodolite. Setting up of a theodolite and measurement of horizontal and vertical angles. Running and prolonging of straight lines. Setting out of centre lines for installing machinery, buildings and simple curves.

Practical.—Handling the above surveying instruments and conducting surveys in the field. Each student is expected to prepare and submit notes, records and drawings pertaining to field work done by him.

Theory and Design of Machines

General.—Strength, properties and testing of materials used in the construction of machines.

Kinematics.—Definition of a machine. Machine elements and pair. Laws of motion. Mechanisms obtained by inversion.

Friction.—Laws of friction. Friction circle, friction axis of a link and dead angle. Friction in sliding and turning pairs. Friction in pivots and toothed gearing. Brakes and dynamometers.

Transmission of Power.—Design of belts, ropes and pulleys. Design of shafts, couplings and bearings. Design of spur gears and forms of wheel teeth.

Lubricants.—Classes of mineral, vegetable and animal lubricants and their properties. Testing of lubricants. Types of lubricators and methods of lubrication.

Design of fastenings used in machine parts like bolts, nuts, keys, cotters and rivets. Glands and stuffing boxes. Packing and jointing materials.

Heat Engines

Solid Fuels.—Wood, charcoal, coal, coke, etc. Manufacture of charcoal. Formation, nature and source of coal. Classification of coal. Carbonisation of coal and manufacture of coke.

Liquid Fuels.—Formation, nature and source of petroleum. Distillation of petroleum and manufacture of petrol, kerosene oil, etc. Manufacture of alcohol, shale oil, benzene and tar oils. Atomisers suitable for burning oils under boilers.

Gaseous Fuels.—Natural and blast furnace gases. Manufacture and nature of coal gas, producer gas, water gas, semi-water gas, suction gas, etc. By-product recovery plants. Surface combustion of gas under boilers.

Engines: General.—B.H.P.; I.H.P. Dynamometers. Indicators. Mechanical and thermal efficiencies.

Laws of Thermodynamics.—Laws of permanent gases, internal energy and total heat of a gas. Entropy. Laws of thermodynamics. Adiabatic and isothermal expansion and work done during adiabatic and isothermal expansion. Carnot's cycle and principal conditions for maximum efficiency.

Internal Combustion Engines.—Combustion of gases and velocity of flame propagation. Cycles of operation of internal combustion engines. Constant volume and constant pressure. Addition of heat. Four-stroke and two-stroke engines. Effect of

strength of mixtures. Ignition. Effect of advancing and retarding of ignition on efficiencies. Effect of compression on fuel economy. Constructional features of several leading types of gas, petrol, oil, Diesel, Semi-Diesel and solid injection engines. Methods of governing.

Hot Air Engines.—Stirling's engine, Ericson's engine, Joule's engine.

Air Compressors and Motors.—Work done in compressing air in compressors. Adiabatic and isothermal compression. Methods of reducing losses. Simple and multistage air compressors. Cooling of compressors. Spray injection and inter-coolers. Effect of clearance on efficiency of compressors and motors. Compressed air tools, drills and hammers. Transmission of power by compressed air.

Dynamics of Engines.—Theory and design of governors, cams and valve gears for internal combustion engines. Crank efforts and crank effort diagrams. Fly-wheels. Balancing of engines.

Workshop Theory

(a) Carpentry :

Carpentry Tools.—Hand tools for cutting wood. Axe, adze, chisel, gouge, draw knife, spokeshave, jackplane, smoothing plane, moulding plane, wood scraper, saws.

Boring Tools.—Brad-awl, gimlet, auger, brace. Sharpening tools and saws.

Wood Working Machines.

(b) Fitting :

Fitter's Tools.—Cold and hot chisel, hammer and file. Scraping. Use of surface gauge, scribing block, etc.

Tapping and Screwing.—Tapping. Standard threads. Pipe threads. Gas threads. Dieing. Details of taps and dies. Using them on steel, cast iron, brass, etc. Drifts. Reamers.

Fitting Appurtenances.—Spanners, chain or pipe wrench, pipe vice, clamp, etc. Screw jack and vice.

(c) Foundry :

Pattern Making.—Selection of timber. Allowances. Joints. Loose pieces, cores, drawbacks, strickle boards. Loam patterns and loam cores. Plaster of Paris and metal patterns. Make-shifts. Pattern shop machinery and maintenance.

Foundry Work.—General principles of moulding. Materials used. Judging quality of materials. Foundry tools. Dry sand,

green sand and loam moulding with typical example of each class of work. Methods of moulding. Venting and pouring arrangements. Cores and core boxes. Use of chills in moulding. Brief description of the cupola. Hard and soft mixtures. Defects in castings and their remedy. Machine moulding. Centrifugal castings.

(d) Smithy :

General arrangement of smithy. Stock fire and open fire. Supply of blast. Smith's tools. Operations in forging. Upsetting, drawing down, cutting out. Theory of welding. Forms of welded joints. Butt, scarf, splice, stud and shaft welds. Strength of welded joints. Power hammer.

(e) Dies and Die Making :

Bending and Forming Dies.—Hand bending fixtures, forming small clips, wire handles, etc. Curling tools, seaming dies, etc.

Punching, Shearing and Blanking.—Punching dies, shearing dies, blanking dies, punch and die for wrenches, washers, etc. Cutting off tools.

Sheet Metal Working.—Hand tools for sheet metal working, shearing machine for sheet metal (hand-operated, foot-operated and power-driven machines). Slitting and rotary shears.

Folding machines: Bar folder, sheet iron folder, pipe folder.

Forming machine: hand-operated and power-driven.

Flanging machines: soldering, brazing and welding.

Making of Dies.—Blanking and forming dies, stripping arrangements. Force required to strip work from punches. Methods of holding punches in place, etc.

(f) Machine Tools :

General.—Difference between rotary and reciprocating tools, and their merits. Vertical and horizontal tools. Automatic machinery and their common features.

Lathes.—Bed, headstock, spindle, speed, gearing, feed control, carriage, apron, tail stock, etc. Cutting speeds. Different types of lathes. Screw cutting in the lathe work. Chuck work. Turret lathe work.

Planing Machines.—Planer beds, table, housings, etc. Reversing gear. Feed mechanism. Cutting speed.

Shaping and Slotting Machines.—Columns, ram and tool head. Cross rail, table, driving gear, feed mechanism, etc.

Drilling and Boring Machines.—Upright drills, radial drills and multiple drills. Speeds and feeds. Power required for

drilling. High speed drilling. Characteristics of a drill. Several types of drills.

Milling Machines.—Vertical and horizontal milling machines. Universal milling machines. Description of parts of the universal miller. Dividing heads. Index drum, tail I stock raising block, swivel vice, steady rest and other attachments. Characteristic operations. Influence of cutter diameters. Assembling cutters, collets, collars, etc. Feed and speeds. Cutting action of face, side and end mills. Examples of milling, face milling, slot milling, boring, facing, keaseating and fluting, and gear cutting. Segment and spot finishing, hobbing a worm wheel, cutting bevel and metre gears, helical grooving milling cutters.

Grinding Machines.—Grinding operations. Dry grinder and attachments, disc grinder, wet grinder, universal cutter grinder, reamer grinder and drill grinder. Principles and advantages involved in cylindrical and conical grinding. Feeds and speeds. Lapping. Abrasives and abrasive wheels.

(g) Heat Treatment of Steel :

Theory underlying heat treatment. Constitution of steel. Upper and lower ranges of transformation. Explanation of hardening, tempering, annealing, case-carburising, chilling, etc., by this theory. Consideration of low carbon and high carbon steels. Eutectoid, hypoeutectoid and hypereutectoid. Alloy steels. Tool steels for high speed work. Practical methods of heating, etc., for hardening, tempering, annealing, etc., of the steels.

Workshop Practice

Two of the four shops not done in the first year, together with the following shops:

Foundry.—Advanced work in the foundry, such as the casting of small centrifugal pumps, cylinders of small engines, etc. Practice in machine moulding. Casting intricate objects. Pattern and core making.

Smithy.—Use of power hammer for drawing down, welding, forging bolts and nuts, welding heads to bolts, preparing keys and cotters. Different types of welding. Advanced work such as the forging of small crankshafts, connecting rods, hooks, spanners, etc. Acetylene welding.

Machine Shop.—Plane turning, taper turning, groove cutting, square thread (right hand), dieing, single V-thread, standard bolt and nut. Double V-thread. C. I. Nut. Practice in planing machine and shaping machine involving the preparation of small plummer-block. Brass gear wheel, milling and turret lathe work.

Machine Drawing

Assembly drawing of simple machine parts, e.g., pipes and pipe joints, couplings, plumber-blocks, stuffing boxes and connecting rods from detail drawings.

Drawings of riveted and other joints from design calculations.

Assembly drawings of parts of machines and engines from sketches.

Mechanical Laboratory

Fuels.—Calorific values of solid, liquid and gaseous fuels. Ash and moisture in coal and oils. Viscosity. Flash point.

Lubricants.—Tests for viscosity, flash point, carbon residue, moisture and lubricating qualities of cylinder and bearing oils.

Hydraulics.—Calibration of notches, weirs, horizontal and submerged orifices. Coefficients of discharge, contraction and velocity for different orifices. Friction in pipes. Testing of pipes and meters.

Heat Engines.—Mechanical equivalent of heat. Efficiency tests on oil, gas and Diesel engines. Air compressors. Compressed air and gas meters. Testing of pressure and vacuum, gauges and indicator springs, and calibrating them.

Theory of Machines.—Velocity and acceleration diagrams for simple harmonic motion. Hooke's joint. Epicyclic train. Use of planimeter.

Electrical Laboratory and Drawing

Laboratory.—Study of fuses. Measurement of low, medium and high resistances. Location of faults. Use of direct current potentiometer. Calibration of voltmeter, ammeter, wattmeter and energy meter. Measurement of inductance and capacity by voltmeter and ammeter.

Determination of B.H. curve and hysteresis loop of magnetic materials.

Open circuit and load characteristics and parallel running of direct current generators. Efficiency test and separation of losses. Temperature rise. Starting, speed regulation and load characteristic of direct current motors. Study of static and rotary balancers. Variation of torque with excitation and armature current. Brake test.

Drawing.—Neat dimensional sketches of parts of electrical machinery, switchgear, insulators, etc. Pole structures for overhead lines.

ELECTRICAL ENGINEERING BRANCH*Building Construction*

Same as for the Mechanical Engineering Branch.

Building Drawing and Estimating

Same as for the Mechanical Engineering Branch.

Theory and Design of Machines

Same as for the Mechanical Engineering Branch.

*Heat Engines***(a) Fuels:**

Solid Fuels.—Wood, charcoal, coal, coke, etc. Manufacture of charcoal. Formation, nature and source of coal. Classification of coal. Carbonisation of coal and manufacture of coke.

Liquid Fuels.—Formation, nature and source of petroleum. Distillation of petroleum and manufacture of petrol, kerosene oil, etc. Manufacture of alcohol, shale oil, benzene and tar oils. Atomisers, suitable for burning oils under boilers.

Gaseous Fuels.—Natural and blast furnace gases. Manufacture and nature of coal gas, producer gas, water gas, semi-water gas, suction gas, etc. By-product recovery plants. Surface combustion of gas under boilers.

(b) Engines:

General.—B.H.P.: I.H.P., Dynamometers. Indicators. Mechanical and thermal efficiencies.

Laws of Thermodynamics.—Laws of permanent gases. Internal energy and total heat of a gas. Entropy. Laws of thermodynamics. Adiabatic and isothermal expansion and work done during adiabatic and isothermal expansion. Carnot's cycle and conditions for maximum efficiency.

Internal Combustion Engines.—Combustion of gases and velocity flame propagation. Cycles of operation of internal combustion engines. Constant volume and constant pressure, addition of heat. Four-stroke and two-stroke engines. Effect of strength of mixtures. Ignition. Effect of advancing and retarding of ignition on efficiencies. Effect of compression on fuel economy. Constructional features of several leading types of gas, petrol, oil, Diesel, semi-Diesel and solid injection engines. Methods of governing.

Properties of Steam.—Generation of steam at constant pressure. Total heat. External work done. Change in the internal

energy. Super-heated steam and its properties. Measurements of dryness fraction after expansion. Mollier and total heat-pressure diagrams.

Generation of Steam.—Boilers. Types of boilers. Vertical, smoke tube and water tube boilers. Super-heaters. Economiser, feed-water heaters. Air heaters. Feed pump, injectors.

Theory of Steam Engine.—Carnot's and Rankine's cycles. Temperature-entropy diagram for Rankine's cycle. Effect of using super-heated steam. Actual indicator diagram. Wire drawing and cushioning. Initial condensation and re-evaporation. Missing quantity. Valve leakage. Steam jacket. Steam consumption. Effects of compounding on steam consumption and efficiency.

Theory of Turbines.—Flow through nozzles. Form of nozzles and blades. Function of a turbine, Impulse and reaction turbines. Compounding of turbines. Velocity and pressure compounded turbine. Cross compounded turbines. Exhaust turbines. Effects of pressure, super-heat and vacuum on efficiency. Governing of turbines.

Mechanical Refrigeration.—Properties of vapour, ammonia, carbon dioxide and sulphur dioxide. Choice of refrigerating agent. Coefficient of performance. Cold air machine. Types of vapour compression machines. Horse power required.

Testing of power plants for efficiency.

Workshop Theory

Same as for the Civil Engineering Branch.

Workshop Practice

Two of the four shops not done in the first year, and machine shop.

Machine Shop.—Plane turning, taper turning, groove cutting. Making square thread, right and left hand V-thread, double V-thread and standard bolt and nut. Practice in shaping and milling machines.

Electrical Technology

Same as for the Mechanical Engineering Branch.

Theory of Direct Current Machines

Same as for the Mechanical Engineering Branch.

Hydraulic Machinery

General.—Impact of water on vanes. Work done by impact of a jet on a series of vanes fixed to a wheel. Work done expressed in terms of velocities of whirl of water entering and leaving the wheel. Jet propulsion.

Classification and Theory of Water Wheels.—Overshot, under-shot, breast and saguebien wheels. Poncelet wheel.

Classification of Turbines.—Impulse and reaction turbines. Pelton wheel. Girard turbine. Banky's turbine. Outward flow, inward flow, parallel flow and mixed flow reaction turbines. Design of turbine blades and wheels. Erection and working of turbines. Governing of turbines. Oil and water pressure governors.

Pumps.—Classification, theory and design of pumps. Force lift and gear pumps. Air lift pumps. Centrifugal pump. Bulso-meter. Humphrey's pump. Boiler feed and Worthington pumps. Hydraulic ram. Erection and management of pumps.

Hydraulic Machines.—Hydraulic press, riveter, punching and flanging machines, crane, lift and hoist, intensifier and accumulator. Hydraulic engines and hydraulic brakes.

Hydraulic transmission of power. Joints and packing used in hydraulic work.

Machine Drawing

Drawings from blue prints and models of some of the simple machine and engine parts, e.g., pipes, pipe-joints, couplings, plummer-blocks, bearings and brackets and assembled views of these.

Design and drawing of riveted and other joints.

Electrical Drawing

Sketches showing details of moving coil, moving iron, and dynamometer instruments.

Sketches showing details of various parts of field poles, field coils, armatures, commutators and bearings of electrical machines.

Assembly drawings from sketches of component parts of direct current generators.

Winding diagrams of direct current generators.

Mechanical Laboratory

Heat Engines.—Calorific value of fuels. Ash and moisture in fuels. Viscosity and flash point of fuel and lubricating oils. Lubricating quality of oils. Testing of gas, oil and Diesel engines for efficiencies.

Hydraulics.—Calibration of notches, weirs and orifices. Friction in pipes. Testing of Pelton wheel, Francis turbine, centrifugal pump, reciprocating pump, hydraulic ram, etc., for efficiency and characteristics. Testing of water meters.

Electrical Laboratory

Study of fuses. Kelvin Balance. Measurement of voltage, current and resistance by potentiometer. Calibration of measuring instruments. Measurement of low, medium and high resistances. Measurement of inductance and capacity by bridge methods. Resonance. Location of faults. Measurement of power energy in direct current and alternating current circuits. Study of thermo-couples.

Determination of B.H. curve and hysteresis loop. Study of leakage.

Open-circuit and load characteristics of separately excited shunt, series and compound wound generators. Parallel running of generators. Temperature rise curve. Distribution of flux in air gap with and without load.

Variation of static torque with field and armature current in direct current motors. Load characteristics of series, shunt and compound wound motors. Speed control of motors. Brake tests on motors.

Determination of efficiency of direct current machines and separations of losses. Hopkinson's test.

Study of static and rotary balancers.

Final Examination in Engineering**CIVIL ENGINEERING BRANCH***Irrigation*

General.—Function of irrigation works and their importance. Natural facilities for irrigation in India.

Irrigation Systems.—Flow irrigation. Lift irrigation. Inundation irrigation of Upper India. Delta irrigation of South India. Comparative conditions of irrigation in the various provinces of India.

Rainfall and run-off computations from rain gauges for calculations of yield or storage and waste weir discharges. Dickens's and Ryve's formulæ. Regulation and duty of water. Duty as realized under tanks and channels. Modules. Block system of irrigation. Financial prospects of schemes.

Reservoirs.—Isolated rain fed tanks. Tanks in series. Tanks fed by feeder channels from rivers or streams. Losses of water by evaporation and absorption. Construction of earthen bunds, their maintenance, repairs of leaks and breaches. Tank weirs and their design.

Masonry Dams.—Principles of design; analytical and graphical methods. Automatic waste weir gates for dams. Stoney and other sluice gates.

Anicut.—Weirs across rivers and principles of their design. Analytical and graphical methods. Head regulators.

Canals and Channels.—Irrigation canals in deltaic and non-deltaic country. Perennial canals. Source of supply and general characteristics of Indian rivers. Design of the canal capacity. Alignment. Limiting velocities. Location and distribution of canal head works and cross drainage works, viz., weir under-sluices, head regulators, falls, rapids, locks, aqueducts, culverts, inlets, level crossings, super-passages, escapes, cart bridges and distributors. Design of the distributory system.

Silt and Scour.—Factors influencing the nature and quantity of river silt. Measurement of quantity of silt. Quantity of silt transported to the sea by the rivers. Silt deposit in reservoirs and tanks. Formation of deltas and characteristics of deltaic rivers. Kennedy's silt theory.

Railways, Tunnels and Harbours

(a) Railways:

Survey and Location.—Railroad surveys and location. Reconnaissance and principles of selection of routes. Preliminary and location surveys. Alignment details: Grades and curves including vertical and transition curves.

Construction and Operation.—Construction and maintenance of earthwork:—Formation, walling, tunnels, and culverts for drainage. Regulation regarding bridges and fixed structure. Permanent way. Gauge of track. Ballast sleepers, rails, rail joints and fastenings. Laying out of the track, super-elevation and curves. Switches, crossings and turnouts. Design of station-yard and sidings. Selection of station sites and approaches. Station machinery, signal systems and interlocking. Outlines of rolling stock design. Track maintenance. Renewals and repairs. Effects of curves. Wear of tyres and rails, creep of rails.

Economics of Railroad Management.—Railroad finances. Operating expenses. Effects of minor and ruling grades. Use of virtual profile, humps and sags. Tractive power of locomotives. Train and other resistances. Pusher grades and balanced grades. Limit of load on wheels and weights of rails. Construction of light railways and street tramways.

(b) Tunnels:

Principles of tunnel surveying and setting out; accuracy of such surveys. Tunnel Design. Cross section. Grade, lining, shafts and drains. Tunnel construction. Headings, enlargements,

different methods of construction, ventilation, portals, and tunnel lining.

(c) Harbours :

General principles governing the design of harbours. Effects of natural forces; tides, currents, fetch, exposure and wave power. Considerations affecting the general design of natural and artificial harbours. Design and construction of breakwaters. Signals, buoys, light-houses and illumination. Dry and wet docks. Slips. Drainage of harbours.

Roads and Bridges

(a) Roads :

Metalled Road Construction.—General economic principles of location, alignment, construction and maintenance of roads with special regard to gradient, direction, geological considerations and drainage. Economics of highway. Types of roadways.

Road resistances, traction and ruling gradients. Curves. Super-elevation for ordinary and motor traffic. Camber on metalled roads. Survey, design construction and maintenance of metalled roads in plain and hilly country. Typical cross sections. Iron and stone road rollers.

Road board specifications. Traffic Census. Standard tests for various kinds of road material.

Modern Road Construction.—Camber on modern roads. Width of roads. Arterial roads and town planning. Construction and maintenance of pavements for cities.

Railway *versus* motor transport. Effect of wheels with steel and rubber tyres.

Formation of permanent way. Types of roadways.

Hill roads, drainage and ruling gradient.

Kinds of Roadway.—Tar, bitumen, asphalt and concrete, and methods of using them for road work. Specifications and methods of construction.

Wear on Roads.—Wear due to traffic. Waves and pot holes due to high speeds. Comparison of wood paving, asphalt, tar, macadam and concrete. Specifications and methods of laying.

(b) Bridges :

General principles concerning the design of bridges.

Preliminary Survey.—Selection of site, location and borings.

Waterways.—Determination of discharge of rivers with reference to area of watershed, and by intensity of rainfall and zoning. Depth of scour during floods.

Foundations.—Box, crate, well, pile, mass and reinforced concrete slab foundations. Cofferdams. Design of piers and abutments. Protection of banks and abutments during floods.

Types of Bridges.—Steel bridges and masonry arches. Rolled I-beam bridges. Plate girders and simple truss bridges of the “deck” and “through” type. Economical spans and arrangements of main girders. Systems of flooring, connection of cross to main girders, etc. Warren and simple lattice girders. General considerations in the design of suspension, cantilever, swing and steel arch bridges.

Shore protection. Revetment. Aesthetics and economy in design. Outline of span, symmetry, scale or proportion of parts.

Irrigation and Bridge Drawing

The course is intended to familiarise the students with the making up of the drawings necessary in the preparation of official projects and engineering contracts and also the drawings and details requisite for the actual execution of engineering works, the usual scales for such drawings and the information to be contained in them.

Candidates are required to produce before the examiners original drawings prepared by them in the College and certified as their work by the members of staff under whom they have received training, and to answer questions relating to such drawings.

Drawings from given data for works connected with bridges such as steel bridges and masonry arches, and irrigation works such as aqueducts, super-passages, syphons, drops and head regulators.

Water Supply and Sanitary Engineering

A. Bio-Chemistry:

The Study of Micro-Organisms.—Methods of cultivation and identification—*aëro*bic and *anæro*bic cultures. Use of microscope. Description of species of micro-organisms important in connection with sanitation.

Bacteria.—The enteric group of organisms.

Moulds, Yeasts, Algæ and Protozoa.—General description.

Enzymes.—General description. Conditions of action. Classification.

Elementary Principles of (1) Nitrification, (2) De-Nitrification, (3) Nitrogen Fixation, (4) Nitrogen cycle, (5) Sulphur cycle and (6) Carbon cycle.

Practical Application of the Foregoing Studies—

Water.—The Bio-Chemistry of water supply and purification. Chemical and bacteriological tests of purity of potable water. Interpretation of results.

Sewage Purification and Utilisation.—(1) Composition and methods of analysis of sewage and effluents. Trade wastes. Interpretation of results.

(2) General account of changes effected during purification.

(3) Control of flies and mosquitoes as applied in sewage works.

(4) Compost.

B. Water Supply:

Value and Importance of Water Supply.—Development of water works. Domestic, commercial and public requirements.

Quantity of Water.—Sources of supply. Rainfall. Evaporation and percolation. Estimation of flow of streams and ground waters.

Quality of Water.—Pollution, Water-borne diseases. Sanitary Survey and conservation of catchment and basin. Water analysis. Protection of water supplies—control of algæ. River pollution and its control.

Construction of Water Works.—General principles of economic construction and arrangement of the several works.

Purification of Water.—Chemical precipitation. Slow and rapid filtration. Modern method of sterilisation and aeration. Construction and maintenance of works for the above.

Pumping and Distribution.—Systems of Supply. Pipes and conduits. Pumping machinery. Service reservoirs. Water towers and standpipes. Distribution systems and appliances such as valves, hydrants and meters. Maintenance and repairs.

C. Sanitary Engineering, Drainage and Sewerage:

Objects of a scheme. Contrast between European and Indian conditions. Surface drainage schemes for removing stagnant rain water. Underground sewerage systems and the general arrangement of the several works. Principles of design. Data to be collected. Allowance for inclusion of the foul part of the rainfall. Size, velocity and gradients of sewers. Selection of a suitable system and evolution of a scheme. Design of the several necessary works on a sewer line.

House Drainage.—Water closets, taps, soil and other pipes, sinks, lavatories, urinals and baths.

The Sewer Line.—Laying, jointing and testing of sewers. Construction of manholes, flushing tanks, over-flows, junctions, catch basins, inverted syphons, etc. Public conveniences. Maintenance of a sewer line.

Pumping Sewage.—Pumping stations. Automatic and other types of ejectors.

Disposal of Sewage.—Treatment of sewage before disposal. Objects. Characteristics of sewage. Modern methods of treatment including diffused air and other processes. Collection and disposal of solid refuse—screening and pulverising—Various methods of composting, utilisation and disposal.

D. Municipal Engineering:

Its scope and aim. Duties of a municipal engineer. Size and growth of cities. Population. The city, and its plan as determined by the streets. Design, construction and maintenance of streets, side walks, curbs, etc. Street lighting, signs and numbers. Collection and disposal of the city waste, markets, parks, cemeteries and shade trees.

E. Town Planning:

General principles. Suitability of an area. Boundaries. Adaptation of design to natural features. Allocation of areas for the several classes of buildings, parks, open spaces and play grounds. Advantages and disadvantages of private open spaces. Improvement of existing condition of cities by removing congestion. Developing garden suburbs or extensions. Beautifying of towns.

Structural Design

Principles of Economic Design.—Factors of safety. Live loads, working stresses and wind pressure. Analytical computation of stresses in roof and simple bridge trusses.

Buildings.—Reinforced brickwork design. Columns and their foundations. Safe bearing power. Brick piers, grillages and foundations for buildings. Practical consideration in selecting type of columns. Practical details of connections, caps and bases.

Roofs and Trusses.—Weights of roof coverings and trusses. Standard formulæ. Selection of types of roof trusses. Fixing of ends. Gusset connections for trusses. Standard types of joints.

Steel Bridge Girders.—Classification of braced structures. Application of the theory of bending due to load of locomotives and trains. Economic types of bridge girders. Economical spans. Arrangement of main girders and flooring.

Plate and Box Girders.—Area and curtailment of flanges. Flange splices. Thickness of web plate. Stiffeners. Pitch of rivets. Lateral bracing. Connection of cross girder to main girder. Systems of flooring.

Lattice Girders.—Types and spans. Open web girders. Stresses in parallel girders and girders of varying depth. Counter-bracing, web bracing and connections. Floor systems and rail bearers. Practical details of design and construction. Cross section of beams. End posts, expansion and pin bearings, etc.

Miscellaneous Structures.—Crane jibs. Riveted steel tanks. Tall buildings.

Earth Pressure.—Rankine's formula. Rebhan's method. Design of retaining walls. Types of retaining walls.

Masonry Structures.—Masonry dams, arches, piers, chimneys.

Reinforced Concrete Structures.—Theory and design of reinforced concrete columns and piles. Detailed designs of simple rectangular and T-beams, floors, cantilever and counterfort, retaining walls and arches. Complete design of a typical cross section of a building including corner columns, stairs and floor openings. R. C. tanks.

Structural Drawing

Typical shop drawings of the structural frame work of steel used in buildings and other structures.

Stability diagrams of structures such as arches, retaining walls, masonry dams and piers.

Drawings relating to reinforced concrete buildings, retaining walls, arches, etc., with details.

Testing of Materials Laboratory

Materials Testing Laboratory.—This course is given in conjunction with the course on structural design and includes practical tests to determine the physical properties of materials of construction.

Simple tests for limes, cements, mortars and road materials. Tests for specific gravity, porosity, elasticity, adhesion, absorption of water, hardness, abrasion, crushing strength, solubility, and weathering properties of various building stones, and bricks. Experiments for crushing strength of various kinds of stones and brick masonry.

Tests for presence of loam, clay and impurities in sand. Void tests. Sieve analysis.

Limes, Mortars and Cements.—Simple tests for specific gravity, strength under tension, compression, adhesion and shear for

various proportions and for different periods of setting. Tests on cements as per British Standard Specifications. Mortar yield for different proportions of mixtures.

Concrete.—Study of the materials used in plain and reinforced concrete. The selection of proper aggregates, their treatment for various purposes and methods of proportioning. Tests for compressive strength and modulus of rupture. Study of water-cement ratio. Slump tests.

Slab Testing.—Testing slabs of reinforced concrete, reinforced hollow brick and reinforced brick for deflection over spans of 8 to 12 feet.

Road Materials.—Testing road materials for toughness, cementation, abrasion and attrition. Grading of material and void tests.

Road Surfacing Materials.—Testing tar, bitumen and asphalt for penetration, flash point and solubility.

Hydraulics Laboratory

This course is given in conjunction with the course in irrigation, and includes practical tests and experiments to determine various coefficients of discharge for irrigation modules, weirs, etc.

Notches.—Calibration of V-notches of 30°, 45°, 65° and 90° Rectangular notch and Cippoletti weir.

Orifices and Adjutages.—(i) Determination of coefficients of discharge, contraction and velocity for a circular orifice.

(ii) Time of emptying a rectangular reservoir through a circular orifice.

(iii) Determination of coefficients of discharge through mouth-pieces of different shapes and different ratios of diameter to length, including the re-entrant type.

Irrigation Modules, Spillways for Water Works and Sluices.—

(i) Gibb Module. Quantity tests to determine modular range and minimum loss of head calculations.

(ii) Ordinary Syphon. Determination of the priming depth crest. Discharge curves for various heads. Effect of raising the downstream lip (on discharge).

(iii) Standing wave flumes—Quantitative tests to obtain formula for discharge. Determination of the coefficient and velocity of approach.

(iv) Determination of discharge coefficient through circular and square barrels with tapered plug openings.

Broad Crested Weirs (Experiments conducted on Scale Models).
—Determination of coefficients of discharge over (a) straight, (b) convex and (c) concave weirs.

Experiments on scale models of the rapid and ogee types of weirs, to determine coefficients of discharge.

Other Measuring Devices.—(i) Hook gauge. Study of the construction and use of the instrument.

(ii) Pitot meter. Study of the construction and use of the instrument in determining the velocities of flowing streams.

(iii) Venturimeter. Study of the construction and use of the instrument in measuring discharges. Determination of the constant for the instrument and the discharge equation.

(iv) Current meters. Study of the construction and use of the instrument.

Estimating, Specification and Engineering Economics

General.—Methods of taking out and scheduling quantities and costs for engineering works of various kinds, such as buildings, culverts, bridges, sluices, waste weirs and irrigation works including reinforced concrete and steel structures. Drawing up specifications in regard to the qualities of materials and tests. General principles for working out the costs of the several items in an estimate.

Department procedure. Drawing up of departmental reports. System of accounts.

Earthwork.—Determination of classified quantities in excavations. Prismoidal and curvature corrections. Volumes by spot levels and contours. Mass diagrams. Calculation of haul and overhaul. Sections and volumes. Lift and lead.

Contracts.—General conditions of contract and their bearing on the responsibilities of the engineer, contractors and the principals.

Engineering Economics.—Fundamental economic principles. Engineering service. Cost of planning, execution and operation. Fixed charges and operating costs. Profit.

Investigation, financing and construction of engineering works.

Elements of Accounting.—Significance of double entry. Assets and liabilities. Goodwill. Financial statements. Balance sheets. Valuation. Depreciation.

Business Administration.—Plan location. Equipment. Organization and management.

Surveying—Theory and Practice

Surveying instruments such as the Zeiss and Precision Levels, the Tacheometer, the Gradiometer, Photo-Theodolite, etc.

Errors in surveying. Principle of the method of least squares. Probable errors. Survey and adjustments and geodetic computations.

Triangulation and trigonometric levelling. Major and minor triangulation and finding of heights and distances. Errors in such surveys and their elimination. Adjustment and calculation of direction. Figure of the Earth.

Underground Surveying.—Tunnel and mine surveys. Connection of surface and underground surveys. Instruments used and methods of using them.

Hydrographical Surveying.—Scope. The tides and tide gauges. Shore line surveys. Methods of sounding. Surveys of tidal currents. Stream measurement.

Geodetic Astronomy and Astronomical Surveying.—Spherical triangles and their elementary properties. Astronomical terms used. The Nautical Almanac. Instruments used: the prismatic astrolabe and the solar attachment. Determination of time, meridian, latitude and longitude.

Curves.—Several methods of setting out curves. Vertical and transition curves. Compound and reverse curves. Diversions.

Project Surveying.—A special project survey should be undertaken during the final year course and the necessary records, calculations and plans submitted.

MECHANICAL ENGINEERING BRANCH

Heat Engines

Properties of Steam.—Properties of wet and superheated steam and vapours. Total heat, external work done, internal energy. Calendar's experiments and equations. Throttling. Entropy, entropy-temperature chart, Molier chart, total heat pressure diagram. Calculations of dryness fraction, total heat and available heat drop.

Steam Engines.—History of early types of engines. New-comen engine. Watt's principles. Expansive working of steam. Watt's engines. Rankine cycle. Efficiency of engine working on Rankine's cycle. Effect of clearance and cushioning on efficiency. Effect of using superheated steam. Losses in actual engine due to wire-drawing, etc. Steam jacketing. Methods of reducing

losses. Advantages of compounding and multiple expansion. Ratio of cylinder volumes. Effect of receiver. Indicator card and diagram factor.

Turbines.—Heat drop. Velocity of steam at throat and exit of nozzles. Nozzle designs. Injectors. Design of nozzles for impulse turbine. Compounding of impulse turbine. Velocity compounded, pressure compounded, velocity and pressure compounded, and cross compounded turbines. Reaction turbines. Parson's, Jungstrom and other types. Design of blades and drums.

Condensers.—Heat transmission through flat plates and tubes. Effect of vacuum on efficiency of engines and turbines. Construction and maintenance of several types of condensers. Jet, barometric, ejector and surface condenser. Air pumps. Vacuum augments.

Boilers.—Efficiency of flat plates. Construction of boilers. Types of boilers. Lancashire, Cornish, Babcock and Wilcox. Stirling, Yarrow, locomotive, portable, marine and vertical boilers.

Stokers.—Mechanical stokers and other auxiliaries.

Governing of Engines.—Several types of governors. Throttling and cut-off governors for engines and turbines.

Valve Gears.—D-slide piston, Corliss, drop, Allen, Mayer's expansion and other valves.

Valve Diagrams.—Piston displacement curves. Rectangular, oval, Reuleaux, Zeuner, Bilgram diagrams.

Link Motions.—Stephenson, Gooch and other link motion gears.

Radial Valve Gears.—Hackworth, Joy's, Marshall and other valve gears.

Testing of engines, boilers, etc.

Mechanical Refrigeration.—Properties of vapour, ammonia, carbon dioxide and sulphur dioxide. Choice of a refrigerating agent. Coefficient of performance. Cold air machine. Types of vapour compression machine. Horse power required. Design and erection of cold storage rooms and refrigeration plant.

Testing.—Testing of fuels, power plants, air compressors and refrigerators.

Hydraulic Engineering

Power Generation.—Brief history of water power development. Impact of water on vanes. Impact of water on a vane when the directions of the motion of the vane and the jet are not parallel. Conditions which the vanes of hydraulic machines should satisfy. Work done on a series of vanes fixed to a wheel. expressed

in terms of the velocities of whirl of the water entering and leaving the wheel. The propulsion of ships by jets of water.

Water Wheels.—Classification and theory of water wheels. Gravity, overshot, undershot, breast, Sagebein, impulse and Poncelet wheels.

Turbines.—Classification and theory of turbines. Reaction turbines. Outward flow, mixed flow, inward flow and parallel flow turbines. Impulse wheels, Girard turbine and Pelton wheel. Banky's turbine. Design of turbine blades, rotors and casings. Regulation of turbines. Oil and water pressure governors. Erection and working of turbines.

Pumps.—Classification and theory of pumps. Centrifugal pump, reciprocating pump, boiler feed pump, Worthington high duty pump, pulsometer pump, Humphrey's internal combustion pump, air lift pump, and gear pump. Design of blades, rotors and casings of centrifugal pumps. Design of simple force and other pumps. Erection and management of pumps.

Hydraulic Machines.—Forging press. Hydraulic press. Hydraulic riveter. Hydraulic lifts. Cranes. Double Power Cranes. Hydraulic engines.

Hydraulic Transmission of Power.—Simple, differential and air accumulators. Hydraulic and steam intensifiers. Hydraulic water mains. Transmission of hydraulic power in mains. Losses and efficiency in hydraulic power transmission. Joints and packings used in hydraulic work.

Power Plant Engineering

Economics of Power Generation.—Choice of power plant. Comparative data and special features of various types of power plant. Capital and operating costs of different kinds of power plant. Factors influencing the location of power plant in relation to other equipment of factories.

Thermal Power Plants.—Small oil and gas engine stations for factory and town electrification schemes. Location. Type, size and number of units. Lay-out. Oil and cooling water systems. Switchgear and diagram of connections.

Steam power stations. Location. Type, size and number of units. Lay-out of turbine or engine, boiler and switch houses. Coal and ash-handling plant. Principles of boiler house operation. Auxiliaries and auxiliary supply. Design of flues and chimneys.

Hydro-Electric Plants.—Hydrometric Survey. Rainfall and run-off. Flood discharge, storage and pondage. Hydrographs and mass curves. Carry-over calculations. Types of dams, canals, flumes and tunnels. Systems of penstocks. Stresses in

pipes. Types of pipes and pipe joints. Economic design of pipe line. Pipe track and supports. Anchor blocks, water hammer and surge tanks. Intakes, gates and valves.

Location and lay-out of hydro-electric stations. Type, size and number of units.

Transmission of Power.—Comparative costs and working data of various modes of power transmission and their special adaptabilities. Conveyors, elevators, travelling cranes, ropeways, run-aways, hoists, etc.

Meters.—Construction and maintenance of meters for measuring flow of water, air and steam; speed indicators.

(Lay-out drawings of an internal combustion engine or a steam station, a hydro-electric station and engineering workshops and drawings of details of ventilation, lighting, etc., will be carried out as college exercises and class record marks only will be allotted for these.)

Mechanical Laboratory

Steam Engines.—Testing of boilers and simple engines. Meyer's expansion valve engine, Bellis and Morcom high speed engine (condensing, and non-condensing) and Curtis turbines, pulsometer, injector, ejector, steam pumps and steam meters. Testing of vapour compression refrigerating machines.

Hydraulics.—Tests on reciprocating and centrifugal pumps and hydraulic ram. Impact of jet on vane. Reaction of jet. Testing of Pelton wheel, Francis turbine and axial flow turbine. Testing of various types of water meters.

Theory of Machines.—Verification of laws of force and motion.

Testing of Materials.—Tests on special steels and materials used in the construction of machines. Cement testing. Testing of machinability of metals. Metallurgical examination of metals.

Testing of foundry sands for permeability and strength.

Testing of bolts and springs.

Workshop Practice

Advanced work on the lathe, planing, shaping and milling machines, involving the preparation of small engines or machine parts. Complete design and construction of a small engine or pump.

Theory and Design of Machines

Kinematics.—Parallel motion, straight line motion and combinations of pure mechanisms.

Links and Chains.—Quadric cycle chain. Slider crank chain. Virtual centres. Centroides. Relative linear and angular velocity. Displacement, velocity and acceleration diagrams. Klien's, Bennet's and Ritterhaus's construction.

Dynamics of Machines.—Forces involved in the moving parts of machinery. Graphical and analytical methods of determining accelerating forces. Conditions for static equilibrium of machines.

Gyroscopic Action.

Design of Machine Parts.—(a) Swivel, thrust, footstep, crank-shaft, ball, roller and axle-box bearings. Pedestals, hangers, brackets and wall-boxes.

(b) Clutches and couplings Hooke's joint and friction clutch.

(c) Special forms of toothed wheels—Spiral and worm gear and bevel gearing.

(d) Transmission of power by wire-ropes, chain drives and screws.

Design of High Speed Shafts.—Whirling of shafts. Critical speed of shafts for centrifugal pumps and steam turbines. Discs and impellers. Thrust blocks for high speed shafts and propellers.

Design of Steel and Iron Tanks.

Design of Machines, Internal Combustion Engines and Steam Engine Details.—Design of pistons and piston rods, connecting rods, cross heads and slides, engine eccentrics, stuffing boxes, glands, fly-wheels, steam engine governors, valves, cocks and sliding valves, and condensers.

Design of machine frames, chains and crane hooks, springs, machine handles.

Design of Boilers and Boiler Details.—Design and construction of boiler shells, flues and tubes, manholes, safety valves, blow-offs, furnaces, fire grates, fire bridges and fire bars, feed water tubes, steam pipes, and superheaters.

Estimating, Specification and Engineering Economics

Cost of Simple Machines.—Estimating of costs of simple machines like the drilling and slotting machines, simple presses, pumps, etc., steel framed structures, stagings, elevated tanks, columns and trusses for the various engineering shops.

Costs of Small Shops.—Estimating of costs of shops with shafting, countershafting, belting, pulleys, bearings, small machine tools, engine or motor drives, and the building.

Costs of Pipe Laying and Jointing.—Estimating of cost of rising and distribution mains of cast iron, riveted or spigot and socket

pipes of steel, and for galvanised iron, water piping, gas pipe work, etc.

Specification of some of the more important construction work, *e.g.*, boiler work, structural work and castings.

Method of drawing up reports, tenders, contracts, etc., for engineering works.

Engineering Economics.—Costs and cost-keeping. Methods of framing costs in the various shops. Materials. Direct and indirect charges.

Methods of valuation of plants. Salvage and scrap values.

Wages.—Piecework, taskwork, bonus, etc. Systems of payment. Time keeping.

Stores and stores management.

Machine Drawing

Assembly drawings of simple machine parts, *e.g.*, pipes and pipe joints, couplings, plumber-blocks, stuffing boxes, and connecting rods from detail drawings.

Drawings of riveted or other joints from design calculations.

Preparation of assembly drawings of machines and engine parts from sketches.

More advanced practice in drafting work. Assembly drawings of machines and engines from drawings of their parts. Shop drawings of parts of engines and machines from the assembly drawings or design calculations.

Theory of Alternating Current Machinery

Transformer.—Types. Mechanical construction. Main and leakage flux. Relation between flux and E.M.F. voltage and current ratios. Vector diagram. Equivalent circuit. Open circuit and load conditions. Regulation. Effect of resistance, leakage reactance, magnetising current and load power factor. Kapp's circle diagram. Parallel operation. Mechanical forces on short-circuit. All-day efficiency. Temperature rise and cooling of transformers. Shape of magnetising current wave and its components. Distorted voltage and flux waves and their effect on hysteresis and eddy current losses. Current rushes on switching. Instrument transformers. Constant current transformers. Auto-transformers. Three-phase transformers.

Inter-connection of transformers and their suitability under different conditions. Triple frequency voltage with different connections.

Testing of transformers.

Alternator.—Calculation of E.M.F. Effect of form factor, distribution factor and coil pitch factor. Tooth ripples and harmonics in voltage wave. Single phase alternator. Disadvantages. Types of three-phase armature windings and connections. Advantage of star connection. Alternator on load. Production of rotating field by armature currents. Armature reaction and leakage reactance. Vector diagram. Methods of predetermining regulation. Tirrill regulator. Synchronising and synchroscopes. Alternators in parallel. Effect of variation of excitation and driving power. Effect of speed regulation on sharing of load. Short circuit of alternators.

Alternator as motor. Nature of torque. Vector diagrams. Variation of current and power with excitation and angle of displacement. Locus diagram. V-curves. Instability. Hunting. Amortisseurs. Self-starting of synchronous motor. Synchronous condenser. Economic limit of power factor correction.

Rectifiers.—Rotary converter. Comparison with motor generator set. General action. Connections in two and multipole rotaries. Voltage and current ratios. Shape of current wave. Heating and capacity. Comparison with same machine used as D.C. and A.C. generator. Methods of supplying 3, 6 and 12 phase rotaries. Voltage regulation. Parallel operation. Raging of inverted rotary. Starting.

Motor Converter.—General action.

Mercury Arc Rectifier.—General principle and constructional features. Efficiency. Action of control grids.

Induction Motor.—Theory of polyphase induction motor. Slip. Squirrel cage and phase wound motor. Variation of E.M.F. current, torque and power with slip. Variation of torque with slip, stator, and rotor resistance. Starting torque. Crawling. Equivalent circuit. Circle diagram. Effect of change of frequency, voltage and air gap on performance characteristics. Starting methods. Speed control and power factor correction. Phase advancer. Cascade running. Induction motor as generator.

Theory and performance of single-phase induction motor. Comparison with polyphase motor. Methods of starting.

A.C. Commutator Motors.—Principles, operation and uses of uncompensated and compensated series and repulsion motors. Theory and applications of three-phase commutator motors.

Electrical Laboratory

Charge and discharge curves of storage cells.

Measurement of candle power of various sources of illumination.

Polarity, ratio, open-circuit, short-circuit, regulation, efficiency, Sumpner and dielectric tests of transformer. Separation of core losses. Parallel running of transformers. Wave shape of magnetising current. Dielectric test on transformer oil.

Open and short circuit tests on alternators. Load test and determination of regulation with varying P.F. load. Synchronising Parallel operation. Determination of V-curves of synchronous motor at various loads.

No load and load tests of induction motor. Measurement of slip. Speed control by resistance, cascade and Scherbius methods.

Voltage and current ratios in rotary converters. Wave shape of currents. Voltage regulation.

Load tests on other kinds of A.C. motors.

Structural Design

Same as for the Civil Engineering Branch.

Designs of Workshop

Lay-out of different shops. Details of ventilation, lighting, etc.

ELECTRICAL ENGINEERING BRANCH

Theory of Alternating Current Machinery

Same as for the Mechanical Engineering Branch.

Generation and Hydro-Electric Engineering

Small oil engine station for town electrification schemes. Location. Type, size and number of units. Lay-out. Oil and cooling water systems. Switchgear and diagram of connections. Relay system. Excitation.

Steam power stations. Location. Size and number of units. Lay-out of turbine, boiler and switch houses, coal and ash-handling plant. Principles of boiler house operation. Auxiliaries and auxiliary supply.

Location and lay-out of hydro-electric stations. Type, size and number of units.

Electrical equipment of large power stations. System of excitation and main connections. Remote control. Relay protection. Overload, leakage, balanced and distance relays. Circuit breakers. Open type, metal clad and compound-field switchgear. Current limiting reactors. Calculation of short circuit currents. Equipment and lay-out of step-up sub-station. High tension switchgear. Earthing. Receiving stations and sub-stations.

Hydrometric survey. Rainfall and run off. Flood discharge. Storage and pondage. Hydrographs and mass curves. Carry-over calculations. Types of dams. Canals, flumes and tunnels. Systems of pipe lines and penstocks. Stresses in pipes. Types of pipes and joints. Economic design of pipe line. Pipe track and supports. Anchor blocks. Water hammer and surge tanks. Intakes, gates and valves.

Transmission and Distribution

Transmission Lines.—Preliminary investigation. Standard voltages. Choice of route, system of transmission, frequency, voltage, material, size and arrangement of conductors. Corona. Calculation of reactance drop and capacity current. Effect of capacity. Solution of short and long lines. Mershon and Dwight charts. Split, middle and three-condenser methods. Dwight's K-Formulas. Rigid solution. Use of synchronous condenser for power factor correction and voltage regulation. Circle diagram. Insulators. Lightning protective equipment. Inductive interference. Transposition.

Calculation of sag and economic span. Loads on supports. Types of towers and cross arms. Design of supports. Clearance diagrams. Location of towers.

Types of cable and their construction. Heating, capacity and voltage stress in cables.

Distribution Networks.—Position of central station and feeding points. Choice and lay-out of distribution systems. Estimation of load. Comparison of direct current and alternating current systems. Voltage drop and power loss. Design of feeders. Kelvin's Law. Design of distributors. Series and parallel systems of street lighting. Design of outdoor distribution sub-stations. Important features of larger distribution schemes. Calculation of networks.

Electrical Machine Design

(a) Direct Current Generator:

Armature.—Specific electric and magnetic loading. Output coefficient. Main dimensions. Peripheral speed. Type of winding. Winding scheme. Number and size of conductors. Type and size of slots. Insulation. Copper and iron losses. Ventilation and temperature rise. Armature reaction.

Commutator.—Dimensions. Number of segments. Insulation. Dimensions of brushes. Reactance E.M.F. losses. Heating of commutator.

Magnetic Circuit.—Field system. Magnetic circuit. Magnetic materials and their saturation curves. Air gap. Fringing. Effect

of slots. Carter's coefficient. Leakage. Ampere-turns on no load and full load.

Field poles. Field winding. Size and length of conductor. Winding space. Insulation. Copper loss. Temperature rise. Design of interpoles.

Shaft.—Stresses. Magnetic pull. Deflection. Formula for calculating the size of shaft.

Other losses. Pre-determination of regulation and efficiency.

Procedure in design. Details of construction.

(b) Transformer :

Relation between out-put and dimensions. Core-material, dimensions, cross section, joints and insulation. Windings, types; size and cross section of conductors; space factor, insulation. Tappings. Stresses between coils. Regulation and efficiency. Heating. Cooling arrangements. Solid, condenser and oil-filled bushings. Procedure in design.

(c) Alternator :

Specific loading and output. Types of armature winding and winding diagrams. Wave shape of induced E.M.F. Harmonics and ripples. Armature insulation. Armature reaction and leakage reactance. Design of field poles and winding. Losses, efficiency, heating and ventilation. Regulation. Procedure in design. Details of construction.

(d) Polyphase Induction Motor :

Stator and rotor slots. Insulation. Types of windings. Size of conductors. Leakage. Magnetising current and no load losses. Copper losses. Heating. Heating and cooling curves. Intermittent rating. Heating of semi-enclosed and enclosed motors. Noise in motors. Dead points at starting. Procedure in design of squirrel cage and slip ring motors.

Estimating, Specification and Engineering Economics

General Principles.—Capital cost and annual charges. Principles of the economic design of engineering works.

Power Production.—Comparison between cost of generation in oil, steam and hydro-electric stations. Comparison between various types of steam plant. Effect of load factor on cost of generation. Combined steam and hydro-electric plants. Base and peak load generation. Advantages of group generation. Super-power and transmission bus. Dependence of capital cost on system of connection and standard of service required.

Transmission and Distribution.—Load survey. Effect of voltage on cost of transmission. Voltage as a function of load and distance of transmission. Economics of different systems of transmission and distribution. Effect of load power factor and charging current on the economics of transmission line. Overhead and underground systems. Power factor correction and its economic limit. Coal transport *versus* electrical transmission. Duplicate lines and ring mains. Cheap tapplings for H.T. Lines.

Town Electrification Schemes.—License for power supply. Safeguards for the licensee and the public. Local generation *versus* bulk supply. Advantages of group generation for neighbouring towns. Estimating of loads.

Tariffs.—Different systems of tariffs and their comparative merits. Effect of diversity factor, load factor, power factor. Means of improving load factor of systems. Rational rates for different classes of loads.

Factory Electrification.—Electrical and mechanical transmission. Local generation and purchase from supply company. Individual and group drives. Types of motors and improvement of power factor.

(In addition to the above, estimates of a transmission line and a distribution network will be carried out as college exercises. Class record marks only will be allotted for this work.)

Traction and Utilisation

Traction.—Direct current, single-phase, three-phase and split-phase systems. Line and tract construction. Current collection. Characteristics of traction motors. Control gear, Locomotive, motor coach and multiple unit trains. Mechanics of train movement. Energy and speed-time calculations. Regenerative braking. Motor-generator, motor-converter, rotary-converter, and mercury arc rectifier sub-stations. Battery locomotives. Diesel-electric traction.

Illumination.—Applications of filament, arc and gaseous discharge lamps. Polar curves, Shades, reflectors and globes. Effects of absorption and reflection. Design of interior and street lighting. Illumination required for different purposes. Choice of type, arrangement and spacing of lamps. Calculation of illumination.

High Frequency Technology.—Elementary principles of telegraphy and telephony by wire and radio. High frequency currents. Electro-magnetic waves and their propagation. Characteristics of thermionic tube and its use as oscillator, amplifier and rectifier.

Principles of broadcasting and reception. Carrier current telephony.

Electric Furnaces and Welding.—Principles and construction of the resistance, induction and arc furnaces, and their applications. Electric welding.

Electric Heating.—Principles of the design and construction of heating and cooking appliances.

Structural Design

Principles of Economic Design.—Factors of safety. Live loads, working stresses, wind pressure. Analytical computation of stresses in roofs and simple bridge trusses.

Buildings.—Columns and their foundations. Safe bearing power. Brick piers, grillages and foundations for buildings. Practical consideration in selecting type of columns. Practical details of connections, caps and bases.

Roofs and Trusses.—Weights of roof coverings and trusses. Standard formulæ. Selection of types of roof trusses. Fixing of ends, gusset and rivet connections for trusses. Standard types of joints.

Masonry Dams and Waste Weirs.

Reinforced Concrete Structures.—Theory and design of reinforced concrete columns. Simple rectangular and T-beams and floors. R.C. tanks.

Mechanical Laboratory

Testing of boilers, simple and compound steam engines, steam pumps, pulsometer, injector, ejector and steam turbines.

Testing of vapour compression refrigerating machines.

Electrical Laboratory

Study of lead and Edison cells. Determination of charge and discharge curves, capacity and efficiency.

Photometric tests on various types of lamps. Study of the effect of globes and reflectors. Variation of candle-power and efficiency with voltage.

Polarity, ratio, open-circuit, short-circuit, load, Sumpner and dielectric tests on transformers. Wave shape of current on no load and load. Variation of core losses with varying voltage and frequency. Separation of iron losses. Parallel operation of transformers. B.D.V. of transformer oil; effect of moisture on B.D.V. calibration of instrument transformers.

Open-circuit and short-circuit tests on alternators. Separation into armature reaction and leakage reactance, and predetermination of regulation. Determination of efficiency and regulation by load test. Wave shapes of alternators on open-circuit and load. Variation of reactance with position of rotor Synchronising and parallel operation of alternators. Effect of variation of excitation, phase and driving power.

V-curves of synchronous motors at various loads.

Voltage and current ratios in rotary converters. Wave shapes of D.C., A.C. and armature currents. Voltage regulation. Effect of variation of field on D.C. volts and A.C. current.

Running light and locked rotor tests on induction motor. Circle diagram and pre-determination of performance. Load test. Measurement of B.H.P. slip, efficiency and power factor. Induction motor as generator. Speed control by resistance, cascade and Scherbius methods. Single-phase induction motor. Load and efficiency tests on other types of motors.

Calibration of energy meters and relays.

Electrical Drawing

Sketches showing details of moving coil, moving iron and dynamometer instruments, air and oil circuit breakers, oil-filled and condenser type bushings and pin and suspension insulators.

Sketches showing—

(a) details of various parts of field poles, field coils, armatures, commutators, bearings, squirrel-cage and slip-ring rotors of electrical machines;

(b) core, windings, insulation and general arrangement of self, water and forced oil-cooled transformers.

Assembly drawings from sketches of component parts of D.C. generator, alternator and transformer.

Winding diagrams of D.C. and A.C. generators and rotary converters.

Diagrams of connections of main circuits of power stations.

Lay-out of out-door distribution sub-station and pole structures.

(In addition to this, designs of a distribution scheme, a high tension transmission line, lay-out of a high tension receiving station and a hydro-electric project will be carried out, as far as possible, as college exercises in the drawing office. Class record marks only will be allotted for this work.)

CHEMICAL ENGINEERING BRANCH

First and Second Years

As per existing syllabus for Civil, Mechanical and Electrical Engineering.

Third Year

(1) Applied Mechanics, Graphic Statics, etc.

(2) Applied Thermodynamics—

(a) Fuels: Same as for Mechanical and Applied Thermodynamics of Combustion processes and similar reactions.

Temperature measurement and scientific control of combustion. Sampling and proximate analysis of coal. The carbonisation assay of coal.

(b) Power production: Same as for Electrical (S.E.).

(c) Heat transmission; Mechanism of heat transfer by conduction, radiation and convection. Fourier series applied to heating and cooling of solid bodies, and of fluids in stream line flow. Condensation of vapours: effect of non-condensable gas. Radiation from surfaces and flames. Effect of nature of materis and boundary films of liquids and gases and heat transmission and its relation to fluid friction. Design of heat exchangers, recuperators, condensers, tube banks and coils. Heat conservation and insulation.

(3) D.C. Machine.

(4) Machine Drawing as for Mechanical and Electricals.

(5) Advanced General Chemistry:

(a) Colloids.

(b) Physico-chemical calculations. Stoichiometrical calculations as an aid to the construction of heat and material balances.

(6) Organic Chemistry: Details to be drawn up later.

Final Year

(1) Hydraulic Machinery, (2) Structural Design, (3) Mechanical Laboratory—Same as for Mechanicals, (4) Applied Organic Chemistry (details to be drawn up).

(5) Chemical Engineering—

- (a) Materials of Construction: iron, steel, alloy, steels, chemical cast iron, lead, copper, tin, zinc, nickel, silver, timber, cements and lutes; Chemical pottery and stoneware.

Corrosion, special materials used in the construction of chemical plant.

Materials used in transportation.

Refractories.

- (b) Metallography:

Lectures and practical work dealing with the preparation of metallic specimens for microscopical examination and the properties of the more important alloys.

- (c) The Flow of Fluids: the Chemical Engineering aspect of fluid flow problems in the light of modern research. The economic design of pipe lines and the calculation of power requirements. Modern pumping equipment for chemical liquids and gases, including compressors and vacuum pumps. Standard methods for the continuous measurement of the flow of fluids.

- (d) The Handling of Solids:

The principles of Mechanical handling, types of equipment for handling solid materials in bulk.

- (7) Construction and Design of Chemical Plant: An introduction to the subject of plant design, taken in conjunction with work in the drawing office. The design and fabrication of low, medium, and high pressure equipment of the type required, in modern chemical industry.

Unit types of chemical plant: The basic processes of Chemical Industry treated from the point of view of the fundamental physical and physico-chemical laws which control them. Application of these laws to the design of the plant units for the operation and the efficiency of operation. The processes dealt with will be selected from the following: Crushing and grinding, evaporation, crystallisation, the separation of liquids and solids, gas cleaning and absorption, mechanical and electrical separation processes. The principal types of plant in industrial use, and the theory and efficiency of their operation, will be dealt with in each case.

(8) Economics of Chemical Industry :

Introductory: Elementary notions regarding economic concepts. Production, Value, Exchange, Distribution, Money. An outline of the economic organisation of India with special reference to industries. Industrial possibilities and problems of the Bombay Presidency.

Business Organisation and Finance: Business units. Partnerships and companies. Raising of capital in different forms and their peculiarities. Loans, managing agency system. Overtrading.

Industrial Organisation: Planning of work and control of production. The problem accentuated by modern developments. Recent attempts at solution. Combines and Trusts. Works organisation and management. Departmental and functional organisation. Selection of employees. Training, planning, graphical and statistical control. Purchasing and stores organisation. Marketing arrangements. Policy of discriminating protection of industrial progress in India. Legislation affecting the chemical industry.

Industrial Relations: Influence of type of business on relationships. Factory legislation. Inspection of factories. Improvement of factory conditions. Welfare work. Statutory and voluntary schemes, their spheres and limits. Accident prevention. Occupational diseases. "Safety First" movement. Training and educational schemes in the factory. Works magazines. Trade Unions and employers' associations. Methods and spheres of schemes of joint consultation. Strikes and lockouts. Arbitration.

Costing and Estimating: Items involved in the cost of production. Preparation of flow sheets (material, energy, time). Determination of cost of plant from plans and specifications. Land. Roads. Fencing. Offices. Capital charges. Depreciation. Interest. Amortisation. Cost of raw materials. Cost of labour of various kinds.

Supervision Charges: Services, gas, water, power, steam, stores, repairs, rates, taxes, insurance, value of by-products. General overhead charges. Packing charges. Transportation charges. Selling charges. Margin of profit on the capital expended.

(9) Treatment of materials: Size reduction, crushing, disintegrating, wet and dry grinding, output, power input work and done in size reduction. Mixing, agitating and homogenising. Mechanical, hydraulic, air, electrostatic and electromagnetic separation. Flotation, sedimentation and filtration. Filter media. Filtration plant,

Theory of filtration. Theory and practice of centrifugal machines. Dust and tar extraction. Leaching and extracting. Continuous and counter current extraction. Handling of inflammable solvents. Evaporation. Entrainment and its prevention. Rate of evaporation. Consumption of heat. Multiple effect evaporation. Evaporation under reduced pressure. Efficiency of evaporators. Distillation and condensation. Theory and practice of fractional distillation. Continuous and batch distillations. Crystallisation. Drying of solids and liquids. Humidification and dehumidification of gases. Absorption. Purification of gases.

Practical Training.—Twelve months, a part of which should be taken during the vacations at the end of the second and third years and the rest after the first year's course, provided that no period shall be less than six weeks in duration.

PHOTOGRAPHY

Manipulation of cameras. Focussing. Loading and unloading of films and plates. Exterior and interior views. Time and instantaneous exposures. Development of films and plates. Printing and toning of P. O. P. and bromide papers. Glazing, trimming and mounting. Preparation of lantern slides.

PHYSICAL CULTURE

Regular work in physical culture is required from all students during the four years' course at college. Seventy-five per cent. attendance is necessary in this as in other subjects. Regular members of the teams in the team games and inter-collegiate sports receive due credit for time spent for practice with the team.

Indoor Work

Systematic and progressive training in callisthenics and drills with dumb-bells, wands and Indian clubs. Gymnastics apparatus work. Special exercises for body building, muscle control and weight lifting.

Class work in wrestling and boxing.

Special gymnasium work—Corrective exercises are given to those who are below normal physically. Suitable exercises are also given to those who desire special development of various parts of the body.

Outdoor Work

Football, basket ball, volley ball, cricket, hockey, tennis and other group games and also cross country and long distance running.

SCHEME OF EXAMINATION

[Vide Ordinance 128 (g)]

First Examination in Engineering

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	Total	REMARKS
1	<i>Group I</i> Algebra and Calculus	1	3	100	..	25	..	
2	Analytical Geometry and Trigonometry ..	1	3	100	..		..
	TOTAL ..	..	..	200	..	25	225	
3	<i>Group II</i> Engineering Physics ..	1	3	100	..	25	..	
4	Engineering Chemistry	1	3	100	..	25	..	
5	Economics ..	1	3	100	..	..	..
	TOTAL ..	..	..	300	..	50	350	
6	<i>Group III</i> Building Materials ..	1	3	100	..	25	..	
7	Mechanical Engineering and Metallurgy ..	1	3	100	..	25	..	
8	Drawing ..	1	4	100	..	100	..	
9	Surveying—Theory ..	1	3	100	..	..	..
	Surveying—Practice ..	..	..	..	75	50	..	
10	Workshop Practice ..	..	..	..	75	75	..	
	TOTAL ..	...	..	400	150	275	825	
	GRAND TOTAL ..	9	..	900	150	350	1,400	

Note.—The Board of Examiners may call for the laboratory note books in Physics and Chemistry for inspection at the time of the examination.

The valuation of laboratory work shall be done during the course by the teacher of the subject and the marks thus awarded reduced to a maximum of 25 in each case, furnished to the University before the commencement of the examination.

Second Examination in Engineering†

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	Total	REMARKS
	CIVIL							
	<i>Group I</i>							
1	*Calculus	1	3	75	.. }	25	..	
2	*Applied Mathematics ..	1	3	75	.. }	25	..	
3	*Applied Mechanics ..	1	4	100	..	25	..	
4	*Graphic Statics .. ..	..	..	..	..	50	..	
5	*Applied Mechanics Laboratory ..	..	..	..	..	25	..	
6	*Hydraulics	1	3	75	..	25	..	
	TOTAL ..	..	..	325	..	150	475	
	<i>Group II</i>							
7	Mechanical Engineering ..	1	3	100	..	†25	..	
8	Electrical Engineering ..	1	3	100	..	25	..	
9	Geology	1	3	75	..	25	..	
10	Workshop and Laboratory .. ..	..	..	..	..	50	..	
	TOTAL ..	..	..	275	..	125	400	
	<i>Group III</i>							
11	Building Construction and Architecture ..	1	3	100	..	25	..	
12	Building Drawing	1	4	100	..	75	..	
13	Surveying	1	3	100	75	100	..	
	TOTAL ..	..	..	300	75	200	575	
	GRAND TOTAL ..	10	..	900	75	475	1,450	

† Includes marks for Machine Drawing.

* Common with Mechanical and Electrical Branches.

Note.—The Board of Examiners may call for the laboratory note books in Geology for inspection at the time of the examination.

The valuation of laboratory work shall be done during the course by the teacher of the subject and the marks thus awarded reduced to a maximum of 25, furnished to the University before the commencement of the examination.

† For the New Scheme, see pages 406–409.

Second Examination in Engineering—Contd.

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	Total	REMARKS	
MECHANICAL									
Group I									
1	*Calculus ..	1	3	75	..	25	..	† Includes marks for Building Drawing.	
2	*Applied Mathematics ..	1	3	75	..				
3	*Applied Mechanics ..	1	4	100	..				
4	*Graphic Statics ..	..	..	..	..	50	..
5	*Applied Mechanics Laboratory ..	..	..	..	..	25	..
6	*Hydraulics ..	1	3	75	..	25	..		
TOTAL ..		..	..	325	..	150	475
Group II									
7	†Building Construction ..	1	3	75	..	25	..		
8	†Electrical Technology ..	1	3	100	..	25	..		
9	†Theory of D.C. Machines ..	1	3	100	..	25	..		
10	Electrical Laboratory and Drawing ..	..	..	..	..	25	..
11	†Surveying ..	..	..	..	..	50	..
TOTAL ..		..	..	275	..	150	425
Group III									
12	Workshop Theory ..	1	3	100	..	25	..		
13	Heat Engines ..	1	3	100	..	25	..		
14	†Machine Design ..	1	3	100	..	25	..		
15	Workshop and Mechanical Laboratory ..	..	..	..	75	50	..
16	Machine Drawing ..	..	..	..	..	50	..
TOTAL ..		..	..	300	75	175	550
GRAND TOTAL ..		10	..	900	75	475	1,450		

* Common with Civil and Electrical Branches.

† Common with Electrical Branch.

Second Examination in Engineering—Concl'd.

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	total	REMARKS
ELECTRICAL								
Group I								
1	*Calculus	1	3	75	..	25	..	
2	*Applied Mathematics ..	1	3	75	..	25	..	
3	*Applied Mechanics ..	1	4	100	..	25	..	
4	*Graphic Statics .. ..	..	..	..	..	50	..	
5	*Applied Mechanics Laboratory ..	..	..	..	..	25	..	
6	*Hydraulics	1	3	75	..	25	..	
	TOTAL ..	..	..	325	..	150	475	
Group II								
7	†Building Construction ..	1	3	75	..	25†	..	
8	†Machine Design ..	1	3	100	..	50‡	..	
9	Heat Engines	1	3	100	..	25	..	
10	Hydraulic Machinery ..	1	3	100	..	25	..	
11	Mechanical Laboratory and Workshop ..	..	..	..	..	50	..	
12	†Surveying .. ..	..	..	..	..	50	..	
	TOTAL ..	..	..	375	..	225	600	
Group III								
13	†Electrical Technology ..	1	3	100	..	25	..	
14	†Theory of D. C. Machines ..	1	3	100	..	25	..	
15	Electrical Laboratory ..	..	..	..	75	25	..	
16	Electrical Drawing .. ..	..	..	..	..	25	..	
	TOTAL ..	..	..	200	75	100	375	
	GRAND TOTAL ..	10	..	900	75	475	1,450	

* Common with Civil and Mechanical Branches.

† Common with Mechanical Branch.

‡ Includes marks for Building Drawing.

§ Includes marks for Machine Drawing.

NEW SCHEME

The Second Examination in Engineering for the B.E. Degree held at the end of the third year, is split up into two examinations, namely, the Second Examination at the end of the second year and the Third Examination at the end of the third year.

The revision will be effective from the Second Year class of 1940-41.

The following is the Scheme for the Second and Third Examinations in Engineering

Serial No.	Subjects	Number of papers	Duration of each paper	Maximum Marks			Total
				Written exam-ination	Oral and Practical	Class records	
	SECOND EXAMINATION						
	Civil						
	Group I						
1	Mathematics	1	3	75	..	10	..
2	Applied Mechanics Laboratory	..	..	..	..	20	..
3	Hydraulics	1	3	75	..	20	..
	TOTAL ..	..	..	150	..	50	200
	Group II						
4	Mechanical Engineering ..	1	3	100	..	25	..
5	Electrical Engineering ..	1	3	100	..	25	..
6	Geology	1	3	75	..	25	..
7	Workshop and Laboratory ..	..	..	..	..	50	..
	TOTAL ..	..	..	275	..	125	400
	GRAND TOTAL ..	5	..	425	..	175	600

New Scheme in Engineering—Contd.

Serial No.	Subjects	Number of papers	Duration of each paper	Maximum Marks			Total
				Written examination	Oral and Practical	Class records	
	MECHANICAL AND ELECTRICAL						
	<i>Group I</i>						
1	Mathematics	1	3	75	..	10	..
2	Applied Mechanics Laboratory	..	..	..	..	20	..
3	Hydraulics	1	3	75	..	20	..
	TOTAL ..	..	..	150	..	50	200
	<i>Group II</i>						
4	Civil Engineering	1	3	75	..	25	..
5	Electrical Technology	1	3	100	..	25	..
6	Surveying .. ..	..	..	..	..	50	..
7	Machine Design	1	3	100	..	25	..
	TOTAL ..	..	..	275	..	125	400
	GRAND TOTAL ..	5	..	425	..	175	600
	THIRD EXAMINATION						
	CIVIL						
	<i>Group I</i>						
1	Mathematics	1	3	100	..	20	..
2	Applied Mechanics	1	4	100	..	30	..
3	Graphic Statics .. ..	..	..	..	..	50	..
	TOTAL ..	..	..	200	..	100	300

New Scheme in Engineering—Contd.

Serial No.	Subjects	Number of papers	Duration of each paper	Maximum Marks			Total
				Written examination	Oral and Practical	Class records	
	<i>Group II</i>						
4	Building Construction and Architecture ..	1	3	100	..	25	..
5	Building Drawing ...	1	4	100	..	75	..
6	Surveying ..	1	3	100	100	100	..
	TOTAL ..	..		300	100	200	600
	GRAND TOTAL ..	5	..	500	100	300	900
	MECHANICAL						
	<i>Group I</i>						
1	Mathematics ..	1	3	100	..	20	..
2	Applied Mechanics ..	1	4	100	..	30	..
3	Graphic Statics ..	..	..	..	..	50	..
	TOTAL ..	..	..	200	..	100	300
	<i>Group II</i>						
4	Theory of D.C. Machines ..	1	3	100	..	25	..
5	Electrical Laboratory and Drawing ..	..	..	..	..	25	..
6	Workshop Theory ..	1	3	100	..	25	..
7	Heat Engines ..	1	3	100	..	25	..
8	Workshop and Mechanical Laboratory ..	..	..	..	100	50	..
9	Machine Drawing ..	..	..	..	..	50	..
	TOTAL ..	..	..	300	100	200	600
	GRAND TOTAL ..	5	..	500	100	300	900

New Scheme in Engineering—Concl'd.

Serial No.	Subjects	Number of papers	Duration of each paper	Maximum Marks				Total
				Written examination	Oral and Practical	Class records		
	ELECTRICAL							
	<i>Group I</i>							
1	Mathematics	1	3	100	..	20	..	
2	Applied Mechanics	1	4	100	..	30	..	
3	Graphic Statics .. ..	..	..	..	..	50	..	
	TOTAL ..	..	..	200	..	100	300	
	<i>Group II</i>							
4	Heat Engines	1	3	100	..	25	..	
5	Hydraulic Machinery	1	3	100	..	25	..	
6	Mechanical Laboratory Work-shop .. ..	..	..	..	..	50	..	
7	Theory of D.C. Machines	1	3	100	..	25	..	
8	Electrical Laboratory .. ..	..	..	..	100	25	..	
9	Electrical Machine Drawing .. ..	..	..	..	..	50	..	
	TOTAL ..	..	..	300	100	200	600	
	GRAND TOTAL ..	5	..	500	100	300	900	

Final Examination in Engineering

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	Total	REMARKS
	CIVIL							
	<i>Group I</i>							
1	Irrigation	1	3	125	..	25	..	
2	Water Supply and Sanitary Engineering ..	1	3	100	..	25	..	
3	Roads and Bridges ..	1	3	100	..	25	..	
4	Irrigation and Bridge Drawing ..	1	4	100	..	75	..	
	TOTAL ..	..	..	425	..	150	575	
	<i>Group II</i>							
5	*Structural Design ..	1	3	100	..	25	..	
6	Structural Drawing ..	..	..	..	..	75	..	
7	Railways, Tunnels and Harbours ..	1	3	100	..	25	..	
8	Testing of Materials Laboratory ..	..	..	..	50	50	..	
9	Hydraulics Laboratory ..	..	..	..	50	50	..	
	TOTAL ..	..	..	200	100	225	525	
	<i>Group III</i>							
10	Estimating, Specification and Engineering Economics ..	1	4	100	..	25	..	
11	Surveying Theory ..	1	3	100	..	..	..
12	Surveying Practice (Project Work) ..	..	..	..	75	100	..	
	TOTAL ..	..	..	200	75	125	400	
	GRAND TOTAL ..	8	..	825	175	500	1,500	

* Common with Mechanical Branch.

Final Examination in Engineering—Contd.

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	Total	REMARKS
	MECHANICAL							
	<i>Group I</i>							
1	Heat Engines ..	1	3	100	..	25	..	
2	Hydraulic Engineering	1	3	100	..	25	..	
3	Power Plant Engineering ..	1	3	100	..	25	..	
4	Project Drawing ..	..	..	..	..	50	..	
5	Mechanical Laboratory ..	..	..	..	100	75	..	
	TOTAL ..	..	..	300	100	200	600	
	<i>Group II</i>							
6	Machine Design ..	1	3	100	..	25	..	
7	Estimating, Specification and Engineering Economics ..	1	3	100	..	25	..	
8	Machine Drawing ..	1	4	100	..	75	..	
9	Workshop ..	..	..	..	50	75	..	
	TOTAL ..	..	..	300	50	200	550	
	<i>Group III</i>							
10	*Structural Design ..	1	3	100	..	25	..	
11	†Theory of A.C. Machinery ..	1	3	100	..	25	..	
12	Electrical Laboratory ..	..	..	..	50	50	..	
	TOTAL ..	..	..	200	50	100	350	
	GRAND TOTAL ..	8	..	800	200	500	1,500	

* Common with Civil Branch.
 Common with Electrical Branch.

Final Examination in Engineering—Concl'd.

Serial No.	Subjects	Number of papers	Hours for each paper	Marks for written examination	Oral and Practical	Marks for records of class work	Total	REMARKS
	ELECTRICAL							
1	<i>Group I</i> Generation and Hydro-electric Engineering	1	3	100	..	25	..	
2	Transmission and Distribution ..	1	3	100	..	25	..	
3	Traction and Utilisation ..	1	3	100	..	25	..	
4	Estimating, Specification and Engineering Economics ..	1	3	100	..	100	..	
5	Electrical Project Drawing ..	..	..	..	..
	TOTAL ..	..	..	400	..	175	575	
6	<i>Group II</i> *Theory of A.C. Machinery ..	1	3	100	..	25	..	
7	Electrical Machine Design ..	1	3	100	..	25	..	
8	Electrical Drawing ..	1	4	100	..	75	..	
9	Electrical Laboratory ..	..	..	..	125	100	..	
	TOTAL ..	..	..	300	125	225	650	
10	<i>Group III</i> Structural Design ..	1	3	100	..	25	..	
11	Mechanical Laboratory ..	..	..	..	75	75	..	
	TOTAL ..	..	..	100	75	100	275	
	GRAND TOTAL ..	8	..	800	200	500	1,500	

* Common with Mechanical Branch.

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide Ordinances 99 to 103*]

RULES FOR PRACTICAL TRAINING

[*Vide Ordinance 103*]

CIVIL, MECHANICAL, ELECTRICAL AND CHEMICAL ENGINEERING

1. Practical training should be undergone only in firms, factories, departments of Government, Municipality, etc., recognised from time to time by the University Council.

2. The practical training may relate to the executive as well as the administrative aspect of Engineering works.

3. Arrangements should be made by the Principal with the following departments of Government and with private firms and companies in Mysore for the admission of students:—

- (1) Public Works Department.
- (2) Electrical Department.
- (3) Railways.
- (4) Department of Industries and Commerce.
- (5) Bhadravati Iron Works.
- (6) Kolar Gold Fields Mining Companies.
- (7) Binny & Company.
- (8) Minerva Mills.
- (9) Maharaja Mills.
- (10) Sri Krishnarajendra Mills.
- (11) Renco Works.
- (12) Other firms in the Mysore State.

4. If any student desires to go for his practical training to any firm or firms outside the State recognised by the University, then the Principal should endeavour to arrange for securing him admission therein.

5. It shall be the duty of the Principal to satisfy himself from quarterly reports of the progress made by the student, and if necessary, to issue instructions for further work to be done through the supervising authority.

6. Progress reports should be sent at least once a quarter and if the progress is considered not to be satisfactory, the student may be required by the University Council to undergo practical training for a further period to compensate for such period during which the progress was not satisfactory.

7. The total period of one year may be made up of several periods, provided that no period is of less than three months' duration and the whole training ordinarily completed within three years after the date of passing the final examination.

Note.—Practical training undergone in firms (recognised by the University Council) during vacations of institutions where a student is undergoing a further course of study, may be taken in full, provided the period does not fall short of two months, and provided that it is after the student passes the B.E. Degree Examination.

8. The period of practical training shall be twelve calendar months, all holidays and leave granted by the firms under their rules being considered equivalent to working days.

The following is a list of institutions recognised for the practical training of B.E. Candidates:—

CIVIL ENGINEERING STUDENTS

1. All Indian Railways.
2. Public Works Departments of Mysore, all British Provinces and Hyderabad, Baroda, Indore, Gwalior, Travancore and Cochin States.
3. District Boards of British Provinces.
4. Municipalities of Mysore, Bangalore, Bombay, Calcutta, Madras, Karachi, Rangoon and Delhi.
5. Port Trusts of Madras, Bombay, Calcutta, Karachi, Vizagapatam and Cochin.
6. Messrs. Marsland Price & Co., Bombay.
7. „ McKenzies, Ltd., Sewri, Bombay, and Burmah Shell Buildings, Madras, G.T.
8. „ Gannon Dunkerly & Co., Linga Chetty Street, Madras, G.T.
9. „ Mawson Vernon & Co., Vulcan House, Nicol Road, Ballard Estate, Bombay.
10. „ Shapoorji Palonji & Co., 70, Meadows Street, Fort, Bombay.
11. „ Tata Construction Co., Ltd., Phoenix Buildings, Ballard Estate, Fort, Bombay.
12. „ P. S. Char & Co., 134, Wakefield House, Ballard Estate, Bombay.
13. „ The Andhra Engineering Co., Ltd., Vizagapatam.
14. „ Renco Works, Post Box 63, Seshadripuram, Bangalore.
15. „ Braithwaite & Co., Madras and Calcutta.
16. „ K. V. Acharya & Co., Bangalore.
17. „ The Mysore Engineering Co., Bangalore.
18. „ Ranade & Bros., Engineers and Contractors, 653, Budhwarpeth, Poona 2 (Head Office) (during the construction period.).
19. The Concrete Association of India, Bombay.
20. Practical training under Mr. T. S. Narayana Rao, B.A., B.E., in the construction of the Mysore Sugar Company Office at Bangalore.

MECHANICAL ENGINEERING STUDENTS

1. All Railway Workshops.
2. P.W.D. Workshops, Madras.
3. Central Industrial Workshop, Bangalore.
4. Workshops of Madras, Calcutta and Bombay Port Trusts.
5. Royal Indian Marine Dockyard, Bombay.
6. Government Ordnance Factories.
7. Mysore Iron Works, Bhadravati.
8. Tata Iron and Steel Company, Jamshedpur.
9. Hukumchand Steel Works, Calcutta.
10. The Indian Steel Rolling Mills, Ltd., Nagapatam.
11. Gold Mining Companies, Kolar Gold Fields.
12. Water Works, Bangalore and Mysore.
13. General Motors (India), Ltd., Bombay.
14. Richardson and Cruddas Engineering Works, Bombay.
15. Alcock Ashdown & Co.'s Engineering Works, Bombay.
16. Massey & Co.'s Engineering Works, Madras.
17. Jessops & Co.'s Engineering Works, Calcutta.
18. Braithwaite & Co.'s Engineering Works, Bombay and Calcutta.
19. Burn & Co.'s Engineering Works, Calcutta.
20. Russa Engineering Works, Calcutta.
21. Dutt Machine and Tool Works, Calcutta.
22. G. W. Brunton & Son, Cochin.
23. Kirloskar Brothers, Ltd., Kirloskarwadi.
24. Cooper Engineering Co., Satara.
25. The Mysore Sugar Co., Ltd., Mandya.
26. Sri Krishnarajendra Mills, Ltd., Mysore.
27. The Bangalore Wollen, Cotton and Silk Mills Co., Ltd., Bangalore.
28. The Mysore Spinning and Manufacturing Co., Ltd., Bangalore.
29. The Minerva Mills, Ltd., Bangalore.
30. The Kaiser-I-Hind Woollen, Cotton and Silk Mills, Ltd., Bangalore.
31. The Imperial Tobacco Factory, Bangalore.
32. The Tata Oil Mills Co., Ltd., Bombay.
33. The Mysore Chemicals and Fertilisers, Ltd., Mysore.
34. The Imperial Institute of Sugar Technology, Cawnpore (entire course).
35. Sembian Panchayet Board Electric Supply.

Textile Mills

36. Buckingham and Carnatic Mills, Madras.
37. Coimbatore Spinning and Weaving Company, Ltd.
38. Madura Mills, Madura.

39. Kaleeswarar Mills, Coimbatore.
40. Gokak Mills, Ltd., Belgaum Dt.
41. Sholapur Spinning and Weaving Co., Ltd., Sholapur.
42. Bomanje Petit Mills, Bombay.
43. Jacob Sassoon Mills, Bombay.
44. Khataw Makarjee Spinning and Weaving Mills.
45. Swadeshi Mills Co., Ltd., Kurla, Bombay.
46. New Victoria Mills, Cawnpore.
47. Swadeshi Cotton Mills.

Cement Factories

48. Coimbatore Cement Works, Madukarai, S.I.R.
49. Shahabad Cement Works, Shahabad, G.I.P., Hyderabad State.
50. Indian Cement Co., Ltd., Porbandar (Kathiawar).
51. C. P. Cement Co., Ltd., Kymore *via* Amdara, G.I.P.
52. Katni Cement and Industrials Co., Ltd., Katni, C.P.
53. United Cement Co. of India, Ltd., P.O. Mehgaon *via* Jukehi, G.I.P., Jubbulpore.
54. Bundi Portland Cement Co., Ltd., Lakheri, B.B.C.I., Rajaputana.
55. Sone Valley Portland Cement Co., Ltd., Japla, E.I.R.
56. The Punjab Portland Cement Co., Ltd., Wah, Attock, N.W.R.

ELECTRICAL ENGINEERING STUDNETS

1. International General Electric Co. (India), Ltd., No. 10, Nicol Road, Ballard Estate, Bombay.
2. Associated Electrical Industries (India), Ltd., 8, Clive Street, Post Box No. 271, Calcutta.
3. The English Electric Co., Ltd., Mount Road, Madras.
4. Siemens (India), Ltd., Post Box No. 2109, Calcutta.
5. A.E.G. (India), Ltd., Ballard Estate, Bombay.
6. A.S.E.A. Electric Co., Ltd., Feltham House, Graham Road, Bombay, *Or* Sassoon House, 4, Lyons Range, Calcutta.
7. Indian Institute of Science.*
8. Messrs. A.C.E.C. (India), Ltd., Madras.
9. The Octavius Steel Co., Ltd., Calcutta.
10. The Bombay Electric Supply and Tramways Co., Ltd., Bombay (period of training equivalent to 3 months).
11. All-India Radio Service.
12. The Bengal Electric Lamp Works.

* The full certificate course in Electrical Technology at the Indian Institute of Science is recognised in lieu of 3 months practical training only.

Hydro-Electric Power Systems

13. Mysore Electrical Department.
14. Kashmir Hydro-Electric System.
15. Pallivasal Hydro-Electric System, Trivandrum.
16. Tata's Hydro-Electric Systems, Bombay.
17. Madras Government Hydro-Electric System, Madras.
18. Gokak Falls.
19. Punjab Hydro-Electricity (Mondi).

Steam Electric Power Systems

20. Madras Electric Supply Corporation.
21. Nizam's Electricity Department.
22. Electric Supply Corporation, Calcutta.
23. Kalyan Power House, Kalyan.

Electric Traction

24. S.I.R. Electric Railway System.
25. G.I.P. Electric Railway System.
26. B.B. and C.I. Electric Railway System.
27. Tramway Company, Madras.
28. Tramway Company, Bombay.
29. Tramway Company, Calcutta.

Electricity Supply Undertakings

30. Town Electricity Supply Companies of Poona, Ahmedabad, Bezwada, Trichinopoly, Madura.
31. Signia Theria Electricity Co., Ltd., Loyabad.
32. Hubli Electricity Company.
33. Power House, Kirloskar Bros., Kirloskar.

M.B.B.S. DEGREE EXAMINATION

(1) The Pre-Medical Examination

CONDITIONS OF ADMISSION*

[Vide Ordinances 104 and 105]

COURSES OF STUDY (GENERAL)

[Vide Ordinance 104]

*No one is allowed to enter for the Pre-Medical Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

COURSES OF STUDY (DETAILED)

[*Vide Ordinance 217 (h)*]

The course shall comprise study and examination in the subjects of Physics, Chemistry, Zoology and Botany according to the following syllabus:

I. Physics

The course in Physics shall include a more extended study of the subject-matter included in the Intermediate Syllabus and in addition, the following:—

Measurement of small intervals of length and of time; the electrically driven tuning fork and the electrical chronograph; graphic method of registering movement.

Periodic motion; uniform circular motion; centrifugal and centripetal forces: simple pendulum.

Properties of matter; Elasticity: Hooke's Law; effect of loading and unloading a wire. Young's modulus and coefficient of rigidity. Molecular phenomena in liquids; osmosis and diffusion; surface tension and capillary phenomena.

Principle of continuity; Torricelli's principle.

Gas laws and their explanation on the basis of the kinetic theory of matter. The critical constants of gas.

The meteorological elements; temperature in shade, in the open and in vacuo; aqueous vapour pressure; clouds and rainfall; pressure, direction and velocity of wind; periodic winds; land and sea breezes and monsoons; instruments for measuring the meteorological elements. Weather and climate.

Heat.—Thermometry; dilatation; change of state; calorimetry; water and air calorimeter.

Radiation and absorption: Newton's law of cooling; theory of exchange; methods of detecting and measuring thermal radiation.

The mechanical theory of heat. First and second laws of thermo-dynamics. The ideal heat engine. Efficiency.

Sound.—Velocity of propagation of sound; Newton's formula and Laplace's correction. Resonance. Sound producers, including the vocal chords. Sound receivers, including the human ear.

Light.—Transverse waves and their production and propagation; velocity of propagation.

The wave theory of light: elements of wave theory of light and the general theory of the diffraction grating.

Double refraction. Polarisation. Saccharimetry.

The eye as an optical instrument. Defects of the eye; myopia, hyper-metropia and astigmatism. Spherical and cylindrical

spectacle lenses; power and numbering of lenses and relevant geometrical optics.

The compound microscope; spherical and chromatic aberrations and how they are eliminated; magnification; oil immersion objective.

The spectroscope; emission and absorption spectra; direct vision spectroscope.

The photographic camera.

Electricity.—Electric capacity and condensers. Non-polarisable electrodes. General study of conductivity of electrolytes; ionisation and migration phenomena. The capillary electrometer. Thermo-couple and thermo-pile. Electro-magnetic induction; mutual and self-induction; the induction coil.

Elements of phenomena accompanying the passage of high tension currents through rarefied gases; cathode rays and X-rays, X-ray photography. Radio-activity.

Practical Physics

General.—The screw gauge; The spherometer and the vernier, microscope. Simple pendulum. Young's modulus by stretching; tenacity. Surface tension (*a*) rise in a capillary tube, (*b*) surface tension balance. Determination and comparison of the viscosities of liquids.

Heat.—Coefficients of expansion. Determination of specific and latent heats by the method of mixtures. Specific heat by the method of cooling. Mechanical equivalent of heat. Thermal conductivity.

Sound.—Sonometer; resonating columns of gas.

Light.—Focal lengths of thin lenses and combinations of lenses. Determination of wave-length by (*a*) Diffraction, (*b*) Diffraction grating. Saccharimeter. Spectrometer and Spectroscope.

Electricity.—Laws of electrolysis. Measurement of resistance with P.O. box. Comparison of E.M.F.'s by the potentiometer. The electrical calorimeter. Conductivity of an electrolyte. Thermo-electromotive force.

II. Chemistry

Candidates are expected to understand the elements of Chemistry included in the Chemistry syllabus of the Intermediate Examination in Science and in addition to have an elementary knowledge of the following:—

General Properties of Matter.—State of aggregation. Gas laws. Kinetic theory. Application in respiratory phenomena. Surface tension. Viscosity. Boiling point. Melting point.

General Nature of Solutions.—Types of solutions. Diffusion and osmotic pressure and their bearing on biological phenomena. Freezing point determination and its importance in Physiology.

Electrolytic Dissociation.—Dissociation power of solvents. Ionisation and its physiological application. Its application to chemical analysis, disinfection and poisonous action.

Law of mass action and chemical equilibrium. Its importance in physiological processes. Hydrogen ion concentration and its importance in biological process. Buffers. Measurement of PH. Iso-electric point. Ionisation of polybasic acids. Electromotive force. Simple reversible and non-reversible cells.

Velocity of reactions. Catalysis. Uni- and bi-molecular reactions. Inversion of sucrose. Effect of temperature. Enzymes.

The colloidal state with special reference to emulsoids. Adsorption; surface and interfacial phenomena. The nature and structure of matter. Radio-activity.

Practical Chemistry

In addition to the practical work in Chemistry of the Intermediate course, the following:—

Simple qualitative analysis excluding phosphate, arsenate and silicate separations.

Elementary quantitative analysis involving the preparation and use of standard solutions of acids, alkalies, bichromate, permanganate, thiosulphate and silver nitrate.

Estimation of oxygen and carbon dioxide.

Gravimetric estimation of sulphate, phosphate, chloride and ash left after ignition.

Simple chemical preparations.

Books for Study

Tooky Kerridge, P. M.: *Principles of Physical Chemistry for Medical Students* (Oxford University Press).

One of the following:—

Findlay, A.: *Physical Chemistry for Students of Medicine* (Longmans).

Steel, M.: (Wiley). *Physical Chemistry and Bio-Physics*.

Philip, J. C.: *Physical Chemistry: Its Bearing on Biology and Medicine* (Arnold).

III. Zoology

The examination in Zoology shall comprise the subjects included in the syllabus for the Zoology part of the Intermediate Examination and in addition an elementary knowledge of the following:—

Bearing of Zoology on Medicine. Animal organisation. The organs and their functions. The tissues. The cell. Nature of protoplasm and cell multiplication. Animals without cellular tissues. The general characteristics of Protozoa. Elementary facts about the mode of life of the disease-producing protozoa. Animals with two cellular layers. Study of Hydra as an introduction to the Metazoa. Structure and life-history of Fasciola Tænia and Ascaris, and other disease-producing worms. General account of Parasitism, Coelomates. Characteristics of annelids. Types for study: Earthworm and Leech. Anatomy and life-history of Cockroach, Mosquito, Housefly and Scorpion. Insects and Arachnids as carriers of disease. The chordata. Amphioxus: its general structure and development. Dog-fish and the ground-plan of vertebrate organisation. The Amphibia—transition from water to air. Rano: its structure and development. Adaptation to terrestrial life. The mammals. Anatomy of the rabbit (only elementary knowledge of the muscular and nervous system). General classification of mammals. Characteristics of Primates. Development of fowl and rabbit (organogeny not required). Respiration and Respiratory contrivances. Excretion. Reproduction. The relation between parent and offspring. The doctrine of the germ plasm. Death.

A general acquaintance with the principles of evolution. A brief study of leading characteristics and structure of the principal Indian poisonous snakes.

Practical Work

In addition to the subjects included in the syllabus for the Intermediate Examination, practical work shall comprise the following:—

Microscopical examination of the slides illustrating the histology of tissues of the frog. Dissections of the Earthworm, Housefly, Frog and Rabbit (detailed knowledge of the muscles and nerves not required). Examination of the prepared skulls of poisonous and non-poisonous snakes—Rat-snake, Cobra and Viper. Examination of the slides illustrative of the segmentation and gastrulation phenomenon in amphioxus and frog. Full mounts and micro-sections of the fowl illustrating the more important development stages of the first three days. Structure of the fœtal membranes and placenta of the rabbit.

Viva Voce.—The candidates will be required to submit their laboratory note-books at the time of practical examination.

The subject-matter of the above syllabus is expected to be covered by about 40–45 lectures and about 36 practical classes of 2½ hours each.

Book for Study

Woodgar, J. H.: *Elementary Morphology and Physiology for Medical Students* (Oxford University Press).

IV. Botany

Plant considered as a living organism. The difference between the living and the non-living. Animals and plants.

Structure and function of the plant cell, plasmolysis, osmotic pressure, permeability, crystalloids, and colloids, nuclear and cell division, differentiation of plant cells. The forms of plant cells, thickening of the cell wall, pits, collenchyma, sclerenchyma, fibres and vessels.

Cell contents such as Starch, Inulin, Sugars, Glucosides, Oil and Fats, Proteins, Crystals, Tanins, Alkaloids, Ethereal Oils, Pigments and Latex considered from the medical aspect.

Structure of the Stem and the Root.—Primary and secondary thickenings; heart and sap woods; annual rings; structure of the leaf. Palisade and spongy tissue. Chloroplasts.

Plant and its Water Supply.—Absorption, root-pressure, conduction, transpiration. Variation of the above in relation to the surroundings of the plant.

Nutrition.—Dry weight and ash contents. Photosynthesis. Parasites. Saprophytes and insectivorous plants.

Storage.—Storage organs, underground and ærial and their biological significance.

Enzymes, their action and the mode of extraction.

Respiration, æration of plants, ærobic and anærobic respiration; liberation of energy.

Growth of the Plant.—Elongation. Conditions influencing growth. Grafting.

Movements.—Geotropism. Heliotropism. Hydrotropism. Chemotropism.

The life-histories of the following plants treated in an elementary manner: Chlamydomonas, Volvox, Spirogyra, Fucus, the origin and evolution of sex and somatic Cells; cystopus. Mucor, some fungi that cause diseases in animals. Yeast. Bacteria. Nitrogen and carbon circulation. Ferns, vegetative and reproductive organs.

Flowering Plants.—Flower, structure and function of the different parts of the flower. Calyx, corolla, stamens and ovary.

Pollination, self and cross. Formation of ovules and seed setting. Fruits and seeds and their dispersal. Seed germination and seedling.

An elementary knowledge of the classification of plants. The chief characteristics and the medicinal plants of the following families: (1) Cruciferae, (2) Rosaceae, (3) Leguminosae, (4) Rutaceae, (5) Euphorbiaceae, (6) Umbelliferae, (7) Solanaceae, (8) Cucurbitaceae, (9) Compositae, (10) Liliaceae, (11) Scitamineae, (12) Palmae and (13) Gramminae.

Heredity.—Inherited and acquired characters. Mendel's observations, Determinations, Dominants, Dominance. Proportion of progeny showing dominant and the recessive characters. Segregation of determinants. Interaction of characters.

Evolution.—Origin of species. Evidence from Morphology. Distribution and Palaeontology. Natural selection. Lamarckism. Segregation and new combinations of determinants.

Practical Work

The students are expected to prepare free-hand sections, stain and mount them for microscopic examination; identify prepared sections; maintain a record of the experiments in plant physiology and identify the plants of the family they study. The students will be required to submit the laboratory records at the time of practical examination.

Note.—The subject-matter of the syllabus is expected to be covered by about 45 lectures and about 40 practical classes of two and a half hours' duration each.

SCHEME OF EXAMINATION

[Vide Ordinance 128 (h)]

		Max. Marks
1. Physics	1 paper of 3 hours ..	100
	Practical Examination (3 hours) ..	50
	Viva voce Examination ..	50
2. Chemistry	1 paper of 3 hours ..	100
	Practical Examination (3 hours) ..	50
	Viva voce Examination ..	50
3. Botany	1 paper of 3 hours ..	100
	Practical Examination (3 hours) ..	50
	Viva voce Examination ..	50
4. Zoology	1 paper of 3 hours ..	100
	Practical Examination (3 hours) ..	50
	Viva voce Examination ..	50

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[Vide Ordinance 108]

(2) M.B.B.S. Degree Examination

CONDITIONS OF ADMISSION*

[Vide Ordinance 110]

COURSES OF STUDY

[Vide Ordinances 109 and 111]

First Year

Anatomy (including Embryology).—One course of lectures in Osteology and Dissection.

Physiology (including Practical Physiology and Bio-Chemistry).—One course of lectures in Physiology and one course of practical work.

Organic Chemistry.—One course of lectures with practical work.

Second Year

Anatomy (including Embryology).—One course of lectures with practical work.

Physiology (including Practical Physiology and Bio-Chemistry).—One course of lectures with practical work and a course of practical work.

Organic Chemistry.—One course of lectures with practical work.

* *Note.*—The following are the conditions under which L.M.P. Diploma-holders will be admitted to the M.B.B.S. Degree Course :—

- (i) Admission shall be granted only to such of the L.M.P. Diploma-holders as have already passed or may pass the Intermediate Examination in Science with two at least of the subjects comprised in the Pre-Medical Course.
- (ii) Students so admitted shall be required to undergo the Pre-Medical Course and to pass the Pre-Medical Examination.
- (iii) They shall be eligible to appear for the First M.B.B.S. Examination at the end of a course of one academical year after passing the Pre-Medical Examination, to appear for the Second M.B.B.S. Examination at the end of a course of one academical year after passing the First M.B.B.S. Examination, and to appear for the Final M.B.B.S. Examination at the end of a course of one academical year after passing the Second M.B.B.S. Examination.

Third Year

Pathology and Bacteriology, including Immunology.—One course of lectures with practical work.

Minor Surgery.—One course of lectures and practical work.

Materia Medica and Pharmacology.—One course of lectures with a practical course of instruction in pharmacy.

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Hospital and Clinical Work.—Post-mortem for three months; out-patient department for three months; surgical wards for three months, medical wards for three months.

Fourth Year

Medicine.—One course of lectures.

Surgery and Surgical Pathology.—One course of lectures.

Venereal Diseases.—One course of lectures and practical work.

Midwifery, Gynæcology and Pædiatrics.—One course of lectures in midwifery and diseases of women and new-born children.

Ophthalmology.—One course of lectures.

Forensic Medicine.—One course of lectures.

Pathology and Bacteriology, including Immunology.—One course of lectures with practical work.

Hygiene.—One course of lectures and one course of practical work.

Hospital and Clinical Work.—Medical wards for two and half months, surgical wards for two and half months, maternity wards for two months, ophthalmic wards for three months.

Fifth Year

Operative Surgery.—One course of practical instruction.

Midwifery, Gynæcology and Pædiatrics.—A continuation course in midwifery and diseases of women and new-born children.

Mental Diseases.—One course of lectures and demonstrations.

Hospital and Clinical Work.—Out-patient department for three months, surgical wards for three months, medical wards for three months, and maternity wards for two months.

Vaccination.—Ten demonstrations.

Fever Hospital.—One month.

Clinical Dental Surgery.—One course of twelve lectures with necessary demonstrations.

Anæsthetics.—Instruction in anæsthetics consisting of attendance at three lectures and the personal administration of anæsthetics in six cases.

Oto-rhino-laryngology.—One course of lectures and demonstrations.

Provided that in respect of candidates who have passed the Final Examination for the L.M.P. Diploma the course shall extend over three years and shall comprise the following:—

First Year

Anatomy (including Embryology).—One course of lectures with dissections.

Physiology (including Practical Physiology and Bio-Chemistry).—One course of lectures with practical work.

Organic Chemistry.—One course of lectures with practical work.

Second Year

Pathology and Bacteriology.—One course of lectures with practical work.

Hygiene.—One course of lectures with practical work.

Ophthalmology.—One course of lectures.

Forensic Medicine.—One course of lectures.

Minor Surgery.—One course of lectures with practical work.

Materia Medica and Pharmacology.—One course of lectures with a practical course of instruction in pharmacy.

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Hospital and Clinical Work.—Post-mortem for three months, surgical wards for three months, medical wards for three months, out-patient department for three months.

Third Year

Medicine.—One course of lectures.

Surgery and Surgical Pathology.—One course of lectures.

Venereal Diseases.—One course of lectures and practical work.

Midwifery, Gynæcology and Pædiatrics.—One course of lectures in midwifery and diseases of women and new-born children.

Hospital and Clinical Work.—Medical wards for three months, surgical wards for three months, maternity wards for two months, ophthalmic wards for two months, out-patient department for one month.

Operative Surgery.—One course of practical instruction.

Mental Diseases.—One course of lectures and demonstrations.

Vaccination.—Ten demonstrations.

Fever Hospital.—One month.

Clinical and Dental Surgery.—One course of twelve lectures with necessary demonstrations.

Anæsthetics.—Instruction in anæsthetics consisting of attendance at three lectures and the personal administration of anæsthetics in six cases.

Oto-rhino-laryngology.—One course of lectures and demonstrations.

SCHEME OF EXAMINATION

[*Vide Ordinance 128 (d)*]

<i>First M.B.B.S. Degree Examination</i>				Max. Marks
1.	Anatomy, Paper I	.. ..	3 hours	75
	Paper II	.. ..	"	75
	Practical (Dissection)	.. ..	"	50
	<i>Viva voce</i> Examination	.. ..	"	50
2.	Physiology, Paper I	.. ..	"	75
	Paper II	.. ..	"	75
	Practical			
	(1) Chemical Physiology	1½ hours		50
	(2) Experimental Physiology	.. ..	"	50
	(3) Histology, Physiology	.. ..	"	50
	<i>Viva voce</i> Examination	.. ..	"	50
3.	Organic Chemistry, 1 paper	.. ..	3 hours	100
	Practical Examination	.. ..	"	50
	<i>Viva voce</i> Examination	.. ..	"	50

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide Ordinance 113 (c)*]

Second M.B.B.S. Degree Examination

PART I

Pharmacology and Materia Medica—

1 paper	3 hours	100
Practical Pharmacy	"	50
<i>Viva voce</i> Examination	"	50

PART II

Max.
Marks

Pathology and Bacteriology—

1.	Pathology, Theory I	..	..	3 hours	75
	“ Theory II	..	..	”	75
	“ Practical	..	..	”	50
	“ <i>Viva voce</i> Examination	..	..	”	50
2.	Hygiene—				
	† Paper	..	..	..	100
	<i>Viva voce</i> Examination	..	..	..	50

PART III

1.	Ophthalmology, 1 Paper	..	..	3 hours	100
	Clinical	..	..	2 “	50
	<i>Viva voce</i> Examination				50
2.	Forensic Medicine, 1 Paper	..	..	3 hours	100
	<i>Viva voce</i> Examination				50

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide* Ordinance 114 (c)]*Final Examination for the M.B.B.S. Degree*

1.	Medicine (including Therapeutics and Pædiatrics)—				
	Paper I	..	..	3 hours	75
	Paper II	..	..	..	75
	Clinical	..	..	..	50
	<i>Viva voce</i> Examination	..	..	..	50
2.	Surgery (including Venereal Diseases)—				
	Paper I	..	..	..	75
	Paper II	..	..	..	75
	Clinical	..	..	..	50
	<i>Viva voce</i> Examination	..	..	..	50
	Operative Surgery, Practical Examination	..	..	..	50
3.	Obstetrics and Gynæcology—				
	Paper I	..	..	3 hours	75
	Paper II	..	..	..	75
	Clinical	..	..	..	50
	Practical and <i>Viva voce</i> Examination				50

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[*Vide Ordinance 115 (c)*]

Diploma of Licensed Medical Practitioner

CONDITIONS OF ADMISSION*

[*Vide Ordinance 118*]

COURSES OF STUDY

[*Vide Ordinances 117 and 119*]*First Year*

Physics.—One course of lectures with practical demonstrations.

Chemistry.—One course of lectures with practical demonstrations.

Elements of Biology.—One course of lectures with practical demonstrations.

Anatomy.—One course of lectures and dissections.

Physiology.—One course of lectures.

Such of the students admitted to the first year class as have passed in the optional group of a degree examination of this University comprising any of the above subjects or other examinations which may be accepted by the University Council as adequate for the purpose, may be exempted by the University Council from attendance and examination in such subject or subjects.

Second Year

Anatomy.—One course of lectures with dissections.

Physiology.—One course of lectures with demonstrations in Chemical Physiology and Histology.

Third Year

Medicine.—One course of lectures.

Surgery.—One course of lectures.

* No one is allowed to enter for the L.M.P. Diploma Examination as a private candidate, unless such a candidate has completed his attendance before appearing for the examination.

Pathology and Bacteriology.—One course of lectures with practical work.

Hygiene.—One course of lectures.

Materia Medica.—One course of lectures and Practical Pharmacy.

Mental Diseases.—One course of lectures.

Hospital Work.—(a) Clinical work in the medical wards of a recognised hospital for four months including post-mortem clerking during the same period.

(b) Clinical work in the surgical wards for four months.

(c) Out-patient hospital practice for two months.

(d) Clinical demonstrations at the mental hospital during the short term.

(e) A course of five clinical demonstrations at the Epidemic Diseases Hospital.

Fourth Year

Medicine.—One course of lectures.

Surgery.—One course of lectures.

Venereal Diseases.—One course of lectures and practical work.

Operative Surgery, Throat, Nose and Ear Diseases.—One course of lectures.

Midwifery.—One course of lectures.

Diseases of Women and Children.—One course of lectures.

Ophthalmology.—A course of lectures extending over four months.

Forensic Medicine.—One course of lectures and practical demonstrations in Toxicology.

Hospital Work.—(a) Clinical work in the medical wards of a recognised hospital for two months.

(b) Clinical work in the surgical wards for two months.

(c) Out-patient hospital practice for one month.

(d) Clinical work in the Ophthalmic Hospital for three months.

(e) Clinical work at the Maternity Hospital for three months.

(f) A course of five demonstrations in Vaccination

SCHEME OF EXAMINATION

[Vide Ordinance 128 (j)]

Subject	Time	Max. Marks for Written	Max. Marks for <i>Viva voce</i>	
<i>First Examination</i>				
1. Physics, 1 Paper ..	2 hours	100	50	
2. Chemistry, 1 Paper ..	3 „	100	50	
3. Elements of Biology, 1 Paper ..	2 „	100	50	
<i>Second Examination</i>				
1. Anatomy, 1 Paper ..	3 hours	100	50	
2. Physiology, 1 Paper ..	„	100	50	
<i>Third Examination</i>				
1. Pathology and Bacteriology, 1 Paper ..	3 hours	100	50	
2. Hygiene, 1 Paper ..	„	100	50	
3. Materia Medica, 1 Paper ..	„	100	50	
<i>Final Examination</i>				
1. Medicine, 1 Paper ..	3 hours	100	50	Clinl. 50
2. Surgery ..	„	100	50	50
3. Midwifery ..	„	100	50	
4. Forensic Medicine ..	„	100	50	

Note.—The date and hour of clinical and *viva voce* examinations will be notified after the written examination.

MINIMA FOR PASS AND PUBLICATION OF RESULTS

[Vide Ordinance 125]

[Detailed Courses of Study for the other Diploma Examinations:—
Please see separate booklet.]

PRESCRIBED TEXT-BOOKS, SPECIAL PERIODS
AND SUBJECTS

A. Intermediate Examination in Arts

I. ENGLISH

1940-41-42

JUNIOR CLASS, 1940-41

Drama and Poetry

Tennyson. *Select Poems*. Ed. Williams and Vallins.
(Methuen). (Omitting *Lancelot and Elaine*.)

Prose

(a) Detailed—

Addison and Goldsmith: *Narrative and Descriptive Essays*. Ed. Collins and Treble (Clarendon Press).
Pages: 5-53 and 75-123.

(b) Non-detailed—

Masefield: *Jim Davis*. (Longmans.)

SENIOR CLASS, 1941-42

Drama and Poetry

Shakespeare: *The Merchant of Venice*.

Prose

(a) Detailed—

Velte: *Narrative and Descriptive Prose*. (Ramlal Suri & Sons, Lahore.)

(b) Non-detailed—

Sharma: *Modern Short Stories*. (Blackie.)

English Grammar

Tipping: *Matriculation English Grammar*.

Reference Book for Composition

G. K. Chettur: *English Composition*.

1941-42-43

JUNIOR CLASS, 1941-42

Drama and Poetry

An Anthology of Longer Poems. (Moles and Moon, Longmans.)
Nos. 2, 3 and 8.

Prose

(a) Detailed—

The English Essay. Ed. Merson (Harrap). Pages: 29-45, 50-54, 63-67, 70-73, 80-84, 95-105, 117-122, 129-134, 143-154 and 229-259.

(b) Non-detailed—

Kipling: *Second Jungle Book*. (Macmillan.)

SENIOR CLASS, 1942-43

Drama and Poetry

Shakespeare: *The Merchant of Venice*.

An Anthology of Longer Poems. (Moles and Moon, Longmans.) Nos. 1, 14 and 17.

Prose

(a) Detailed—

Velte: Narrative and Descriptive Prose. (Ramlal Suri & Sons, Lahore.)

(b) Non-detailed—

Plays of Adventure. Ed. Bayliss. (Harrap.)

II. SECOND LANGUAGE

(A) KANNADA

1940-41-42

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1940-41

Kannadada Bavuta (omitting Section I). (Published by the Kannada Sahitya Parishat.)

Buddha, by C. K. Venkataramiah.

SENIOR CLASS, 1941-42

Kannadada Bavuta (to be continued and finished).

Vidyaranya Vijaya, by D. V. Gundappa. (Karnataka Publishing House, Bangalore.)

Paper II—I.A. only

Socratesana Koneya Dinagalu, by A. N. Moorthy Rao. (Mysore University Publication.)

Pamparamayana Sangraha, edited by T. Srinivasaraghavachar and D. L. Narasimhachar. (Mysore University Publication.)

(Both texts to be begun in Junior I.A. and to be continued and finished in Senior I.A.)

1941-42-43

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1941-42

Mooru Natakagalu (only two plays): *Smasana Kurukshetram* and *Maharatri*, by K. V. Puttappa. (Kavyalaya, Shimoga.)

Karana Purusha, by R. S. Mugali. (Manohara Granthamala, Dharwar.)

SENIOR CLASS, 1942-43

Mooru Natakagalu (to be continued and finished).

Vidyaranya Vijaya, by D. V. Gundappa. (Karnataka Publishing House, Bangalore.)

*Paper II—I.A. only**Adikavi Valmiki*, by M. Venkatesha Iyengar.*Sankshiptha Rajasekhara Vilasam*, edited by T. N. Channappa. (Both texts to be begun in Junior I.A. and to be continued and finished in Senior I.A.)

(B) TELUGU

1940-41-42*Paper I—Common to I.A. and I.Sc.*

JUNIOR CLASS, 1940-41

Jathaka Katha Guchchamu (Visvanthara Jathakamu), by S. Sooryanarayana Sastry, Secunderabad.

SENIOR CLASS, 1941-42

Gouthama Buddhudu (drama), by R. Narayana Rao, Assistant Master, Government Secondary Training School, Bellary.*Paper II—I.A. only*

JUNIOR CLASS, 1940-41

Andhrabharatamu: Aranyaparvamu, Canto 3, vv. from 293 to the end of the Canto. (V. R. Sastrulu & Sons, Madras.)

SENIOR CLASS, 1941-42

Mathrimandiramu, by Venkataparvatheesvarakavulu. (The Andhra Pracharinee Granthanilayamu, Pithapur.)**1941-42-43***Paper I—Common to I.A. and I.Sc.*

JUNIOR CLASS, 1941-42

Jathaka Katha Guchchamu (Visvanthara Jathakamu), by S. Sooryanarayana Sastry, Secunderabad.

SENIOR CLASS, 1942-43

Annapurna Mandiramu. Visva Bharati Series, Vol. I. (V. R. Sastrulu & Sons, Esplanade, Madras.)*Paper II—I.A. only*

JUNIOR CLASS, 1941-42

Andhrabharatamu: Aranyaparvamu, Canto 3, vv. from 293 to the end of the Canto. (V. R. Sastrulu & Sons, Madras.)

SENIOR CLASS, 1942-43

Mathrimandiramu, by Venkataparvatheesvarakavulu, Vol. I.
(The Andhra Pracharinee Granthanilayamu, Pithapur.)

(C) TAMIL

1940-41-42

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1940-41

Harischandrapuranam: Nagarningiya Kadam, stanzas 1-80.
(Vidyarthnakara Press, Madras.)

Life and Work of Rev. Caldwell, by R. P. Setu Pillai. (Hilal Press, Tinnevely.)

SENIOR CLASS, 1941-42

Harischandrapuranam: Nagarningiya Kadam, stanzas 81-153.

Napoleon, by A. Ramaswami Gownder. (Sanjivini Press, Dharmapuri.)

Paper II—I.A. only

JUNIOR CLASS, 1940-41

Mariyayil, by S. Somasundara Bharati. (Sadhu Press, Royapettah.)

Ilakkana Churukkam, by Arumuga Navalar. (Navalar Press, Mint Street, Madras.)

SENIOR CLASS, 1941-42

Kural, Chapters 49-63.

Ilakkana Churukkam, by Arumuga Navalar.

1941-42-43

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1941-42

Harischandrapuranam: Mayana Kadam. (Vidyarthnakara Press, Madras.)

Rural Reconstruction, by A. Muthiah. (K. Palaniyandi Pillai & Co., George Town, Madras.)

SENIOR CLASS, 1942-43

Harischandrapuranam: Mayana Kadam.

Pratapa Mudaliar Charitram, by Vedanayakam Pillai. (Saiva Siddhantha Works Publishing House, Madras.)

Paper II—I.A. only

JUNIOR CLASS, 1941-42

Villiputturalvar Bharatam: Virataparvam-Nadukaranthacharukkam, Malporcharukkam, Kichakanvathaicharukkam.

SENIOR CLASS, 1942-43

Kural: Chapters 64-73, Amaichiyal.

Both Classes

Ilakkana Churukkam, by Arumuga Navalar. (Navalar Press, Mint Street, Madras.)

(D) SANSKRIT*

1940-41-42

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1940-41

Pratijna-Yaugandharayana of Bhasa.

SENIOR CLASS, 1941-42

Kadambari-Sangraha: pp. 1-19. Fifth Edition, 1939. (Balamanorama Press, Mylapore, Madras.)

Paper II—I.A. only

JUNIOR CLASS, 1940-41

Raghuvamsa: Canto XIV.

SENIOR CLASS, 1941-42

Nilakantha-Vijaya of Nilakantha Dikshita, Chapter III. (Balamanorama Press, Mylapore, Madras.)

1941-42-43

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1941-42

Pratijna-Yaugandharayana of Bhasa.

SENIOR CLASS, 1942-43

Kadambari-Sangraha: pp. 1-19. Fifth Edition, 1939. (Balamanorama Press, Mylapore, Madras.)

* *Note.*—Books against which the names of publishers are not mentioned can be had from the Oriental Book Agency, Sukrawarpet, Poona 2.

Paper II—I.A. only

JUNIOR CLASS, 1941-42

Raghuvamsa: Canto XIV. (Nirnaya Sagar Press.)

SENIOR CLASS, 1942-43

Nilakantha-Vijaya of Nilakantha Dikshita, Chapter III.
(Balamanorama Press, Mylapore, Madras.)

(E) URDU*

1940-41-42

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1940-41

*Prose**Chand Ham' Asar.**Poetry**Jadhbati-i-Fitrat*, Part III (First half).

SENIOR CLASS, 1941-42

*Prose**Abi-Hayath-Kay Latifay.**Poetry**Jadhbati-i-Fitrat*, Part III (Second half).*Paper II—I.A. only*

JUNIOR CLASS, 1940-41

*Prose**Ibnul-Waqt* (First half).*Poetry**Majmue-Ghazliyyat*, Part III (First half).

SENIOR CLASS, 1941-42

*Prose**Ibnul-Waqt* (Second half).*Poetry**Majmue-Ghazliyyat* (Second half).

* Note.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

1941-42-43*Paper I—Common to I.A. and I.Sc.*

JUNIOR CLASS, 1941-42

*Prose**Chand Ham' Asar.**Poetry**Diwan-e-Hali: Qit'at and Rubaiyyat (First half).*

SENIOR CLASS, 1942-43

*Prose**Abi-Hayat-Ke Latifay.**Poetry**Diwan-e-Hali: Qit'at and Rubaiyyat (Second half).**Paper II—I.A. only*

JUNIOR CLASS, 1941-42

*Prose**Ibnul-Waqt (First half).**Poetry**Majmue-Ghazliyyat, Part III (First half).*

JUNIOR CLASS, 1942-43

*Prose**Ibnul-Waqt (Second half).**Poetry**Majmue-Ghazliyyat (Second half).*

(F) PERSIAN*

1940-41-42*Paper I—Common to I.A. and I.Sc.*

JUNIOR CLASS, 1940-41

*Prose and Poetry**Intermediate Persian Course, Punjab University—latest edition (First half).*

* *Note.*—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamia Book Depot, Kurnool.

SENIOR CLASS, 1941-42

Prose and Poetry

Intermediate Persian Course, Punjab University—latest edition
(Second half).

Paper II—I.A. only

JUNIOR CLASS, 1940-41

Akhalaqi-Kashifi.

Rustom wa Sohrab (First half).

SENIOR CLASS, 1941-42

Akheri-Yodegar-e-Nader Shah.

Rustom wa Sohrab (Second half).

1941-42-43*Paper I—Common to I.A. and I.Sc*

JUNIOR CLASS, 1941-42

Prose and Poetry

Sabad-e-Gul (First half).

SENIOR CLASS, 1942-43

Prose and Poetry

Sabad-e-Gul (Second half).

Paper II—I.A. only

JUNIOR CLASS, 1941-42

Prose

Akhlaq-e-Kashefi.

Poetry

Rustom-o-Sohrab (First half).

SENIOR CLASS, 1942-43

Prose

Akhrin-yadgar-e-Nadir Shah.

(G) ARABIC*

1940-41-42

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1940-41

*Prose**Al-Quratul Rashidan: Part III.**Poetry**Diwan-e-Ali: Radif Alif and Bey.*

SENIOR CLASS, 1941-42

*Majani-ul-adab: Part I (pp. 7-55).**Paper II—I.A. only*

JUNIOR CLASS, 1940-41

*Prose and Poetry**Majani-ul-adab: Second half of Part I (pp. 55-100).*

SENIOR CLASS, 1941-42

*Prose and Poetry**Majani-ul-adab: Second half of Part I (pp. 100-150).*

1941-42-43

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1941-42

*Prose**Al-Qeratul Rashidahn, Part III.**Poetry**Diwan-e-Ali: Radif Alif and Bey.*

SENIOR CLASS, 1942-43

Majani-ul-adab: Part I (pp. 7-55).

* *Note.*—Books against which the names of publishers are not mentioned can be had from one of the following firms :—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

Paper II—I.A. only

JUNIOR CLASS, 1941-42

*Prose and Poetry**Majani-ul-adab*: Second half of Part I (pp. 55-100).

SENIOR CLASS, 1942-43

*Prose and Poetry**Majani-ul-adab*: Second half of Part I (pp. 100-150).

(H) FRENCH

1940-41-42

Paper I—Common to I.A. and I.Sc.

JUNIOR CLASS, 1940-41

Loti: *Pêcheur'd Islande* (Ed. Senior: Oxford).Boiëlle: *French Poetry* (Nos. 51-60).

SENIOR CLASS, 1941-42

Molière: *Le Bourgeois Gentilhomme* (Ed. Warren: Harrap).Boiëlle: *French Poetry* (Nos. 61-70).*Paper II—I.A. only*

JUNIOR CLASS, 1940-41

Blazac: *Le Cure de Tours*.

SENIOR CLASS, 1941-42

Racine: *Athalie* (Harrap).

I. INTERMEDIATE EXAMINATION IN ARTS, 1941 AND 1942

Mérimeé: *Colomba* (Macmillan).

II. INTERMEDIATE EXAMINATION IN SCIENCE, 1943

JUNIOR CLASS, 1941-42

Coppeë: *Contes Choisis* (Macmillan).Boiëlle: *French Poetry* (Nos. 71-80).

SENIOR CLASS, 1942-43

Molière: *Le Bourgeois Gentilhomme*.Boiëlle: *French Poetry* (Nos. 81-90).

III. INTERMEDIATE EXAMINATION IN ARTS, 1943

JUNIOR CLASS, 1941-42

Coppeë: *Contes Choies* (Macmillan).

Boiëlle: *French Poetry* (Nos. 71-80).

Mérimée: *Colomba* (Macmillan).

SENIOR CLASS, 1942-43

Molière: *Le Bourgeois Gentilhomme*.

Boiëlle: *French Poetry* (Nos. 81-90).

Corneille: *Polyeucte* (Heath).

(I) LATIN

1940-41-42

Paper I—Common to I.A. and I.Sc.

Livy, Book II.

Paper II—I.A. only

Cicero: In Catilinam, I.

Virgil: Aeneid, IX.

III. OPTIONAL SUBJECTS.

SELECTED LANGUAGE

(a) Old and Middle Kannada

Same as for Kannada—Second Language.

(b) Modern Kannada

Same as for Kannada—Second Language.

(c) Telugu

Same as for Telugu—Second Language.

(d) Tamil

Same as for Tamil—Second Language.

(e) Sanskrit

Same as for Sanskrit—Second Language.

(f) Urdu

Same as for Urdu—Second Language.

(g) Persian

Same as for Persian—Second Language.

(h) Arabic

Same as for Arabic—Second Language.

(i) *Hindi***1940-41-42**

JUNIOR CLASS, 1940-41

*Detailed Prose**Hindi Madhuri*, Part I. (Dakshina Bharat Hindi Prachar Sabha, Madras.)*Detailed Poetry**Panchavatee*, by Maithili Sharan Gupta. (Sahityasadan, Chirgaon, Jhansi.)*Non-detailed Prose**Prem Panchami*, by Premchand. (Dakshina Bharat Hindi Prachar Sabha, Madras.)

SENIOR CLASS, 1941-42

*Detailed Prose**Durgadas*, by D. L. Roy. (Hindi Grantharatnakara Karyalaya, Bombay.)*Detailed Poetry**Chunehue Phool*, Parts I and II only (both in one volume). (Dakshina Bharat Hindi Prachar Sabha, Madras.)*Non-Detailed Prose**Annapurnika Mandir*, by Nirupama Devi. Fifth Edition. (Hindi Grantharatnakara Karyalaya, Bombay.)*Books Recommended for Study**Hindi-English Self-Instructor*. (Dakshina Bharat Hindi Prachar Sabha, Madras.)*Sankshipta Hindi Vyakarana*, by Kamta Prasad Guru. (Indian Press, Allahabad.)**1941-42-43**

JUNIOR CLASS, 1941-42

*Detailed Prose**Hindi Madhuri*, Part I. (D. B. H. P. Sabha, Madras.)*Detailed Poetry**Jayadratha Vadha*, Maithili Sharan Gupta (pp. 1-49) (Sahityasadan, Chirgaon, Jhansi.)*Non-detailed Prose**Prem Panchami*. (D. B. H. P. Sabha, Madras.)

SENIOR CLASS, 1942-43

Detailed Prose

Noorjahan, D. L. Roy. (Hindi Grantharatnakar Karyalaya, Bombay.)

Detailed Poetry

Jayadratha Vadha, Maithili Sharan Gupta (pp. 50-100).

Non-detailed Prose

Agnapurnika Mandir, by Nirupama Devi, translated by Pandit Isnwariprasad Sharma. (Hindi Grantharatnakar Karyalaya, Bombay.)

Books Recommended for Study

Hindi-English Self-Instructor. (D. B. H. P. Sabha, Madras.)

Sankshipta Hindi Vyakarana, Kamta Prasad Guru. (Indian Press, Allahabad.)

B. Intermediate Examination in Science**I. ENGLISH**

Same as for those prescribed for the Intermediate Examination in Arts.

II. SECOND LANGUAGE**(A) KANNADA**

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

(B) TELUGU

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

(C) TAMIL

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

(D) SANSKRIT

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

(E) URDU

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

(F) PERSIAN

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

(G) ARABIC

Same as those prescribed for Paper I for the Intermediate Examination in Arts.

C. B.A. Degree Examination

I. COMPULSORY ENGLISH

1940-41-42

*Paper I*Shakespeare: *Hamlet*.Gibbs: *Longer English Poems*. (Harrap.)

The following selections:—

Lycidas, MacFlecknoe, Tintern Abbey, Laodamia,
and the poems contained in pages 227-254.Boas: *Modern English Prose*, Second Series. (Macmillan
Scholar's Library.) (Omitting *Fiction*.)*Note*.—Boas: *Modern English Prose*, First Series (omitting *Fiction*) will
be an alternative text.*Paper II*Whitfield: *An Introduction to Drama*. (O.U.P.)Butler: *Erewhon*. (Everyman's Library, Dent.)

1941-42-43

*Paper I*Shakespeare: *Hamlet*.Milton: *Samson Agonistes*.Boas: *Modern English Prose*, Second Series. (Macmillan
Scholar's Library.) (Omitting *Fiction*.)*Note*.—Boas: *Modern English Prose*, First Series (omitting *Fiction*) will
be an alternative text for Boas Second Series.*Paper II*Butler: *Erewhon*. (Everyman's Library, Dent.)*Selected Longer Poems*, Pocock, pp. 140 to end. (Dent.)

II. SECOND LANGUAGE

(A) KANNADA

1940-41-42

Bhasana Ekanka Natakagalu, by L. Gundappa. (Published
by the Karnataka Sangha, Central College, Bangalore.)*Devichoudhurani*, by B. Venkatachar. (Published by the
Bangalore Press, Bangalore City.)*Adipurana Sangraha*, by Muliya Thimmappaiya. (Published
by the author, Mangalore.)

1941-42-43

Ananda Matha, by B. Venkatachar. (Published by the Bangalore Press, Bangalore City.)

Kūnaravyasa Prasasthi. (Published by the Karnataka Sangha, Maharaja's College, Mysore.)

Sakunthala, by Basappa Sastri. (Published by M. Mahadevasastri, Kerlapura, Hassan District.)

(B) TELUGU

1940-41-42

Vikramarkacharithūmu, by Jakkanna: Canto 2, vv. from 70 to the end of the Canto.

Andhra Mahabharatham, Virataparvamu: Canto 2, vv. 128 to 235 (inclusive). (V. R. Sastrulu & Sons, Madras.)

Tales from Bhasa, by M. Sooryanarayana Sastry, Lecturer in Telugu, Andhra University, Waltair.

1941-42-43

Vikramarkacharithamu, by Jakkanna, Canto 2, vv. from 70 to the end of the Canto.

Andhra Mahabharatham, Virataparvamu, Canto 2, vv. 128 to 235 (inclusive). (V. R. Sastrulu & Sons, Madras.)

Tales from Bhasa, Vol. I, by M. Sooryanarayana Sastry, Lecturer in Telugu, Andhra University, Waltair.

(C) TAMIL

1940-41-42

JUNIOR CLASS, 1940-41

Silappadikaram, Pugar Kadam: Chapters 5, 6 and 7.

Padmavaihi Charitram, by A. Madhava Iyer. (Perunkulam House, Edward Elliot Road, Mylapore, Madras.)

SENIOR CLASS, 1941-42

Silappadikaram, Pugar Kadam: Chapters 5, 6 and 7.

Arumuga Navalar Charitram, by D. Kailasapillai. (Vidyanupala Press, Madras.)

1941-42-43

Silappadikaram, Madurai Kadam.

Periyar Varalaru, by Suddhananda Bharati. (Niranjanananda Swami, Ramanashram, Tiruvannamalai.)

Serar Thaimurai, by S. Somasundara Bharati. (Author, Pasumalai.)

(D) SANSKRIT*

1940-41-42

Kadambari Sangraha, pp. 111-141. Fifth Edition, 1939.
(Balamanorama Press, Mylapore, Madras.)

Sakuntala of Kalidasa.

1941-42-43

Kadambari Sangraha: pp. 111-141. Fifth Edition, 1939
(Balamanorama Press, Mylapore, Madras.)

Sakuntala of Kalidasa. (Nirnaya Sagar Press.)

(E) URDU

1940-41-42

Zindagi.

1941-42-43

Zindagi, by Chaudri Afzal Haq.

(F) PERSIAN

1940-41-42

Qissai-Haji Baba Isfahani, First 150 pages.

1941-42-43

Qissai-Haji Baba Isfahani, First 160 pages.

(G) ARABIC†

1940-41-42

Qira'atur—Rashidah, Second Part.

1941-42-43

B.A. Arabic Course—Punjab University—1934 Edition.

* *Note*.—Books against which the names of publishers are not mentioned can be had from the Oriental Book Agency, Sukrawarpet, Poona 2.

† *Note*.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

III. OPTIONAL SUBJECTS

(A) ENGLISH

1940-41-42

*Drama*Shakespeare: *The Tempest*.Bernard Shaw: *St. Joan*.Goldsmith: *She Stoops to Conquer*.*Poetry*Parker: *Longer Modern Verse*. (O.U.P.)

An Anthology of Longer Poems—Moles and Moon. (Longmans.)
 Nos. 6 7, 9, 12, 13, 17 and 18.

*Prose*Burke: *Speeches on America*. Ed. Cavanaugh. (Bell.)Cairncross: *Eight Essayists*. (Scholar's Library: Macmillan.)Thackeray: *Henry Esmond*.

1941-42-43

*Drama*Goldsmith: *She Stoops to Conquer*.Shakespeare: *The Winter's Tale*.Bernard Shaw: *St. Joan*.*Poetry*Milton: *Paradise Lost*, Books 1 and 2.*Golden Treasury*, Book IV.*Prose*Cairncross: *Eight Essayists*. (Scholar's Library, Macmillan.)Thackeray: *Henry Esmond*.

Lytton Strachey: *Eminent Victorians*. (Chatto and Windus.
 Phoenix Library).

(B) KANNADA

1940-41-42

Paper I

Pampa Bharata: Asvasas 13-14. (Published by the Kannada
 a hitya Parishat, Bangalore.)

Gadayuddhanataka. (Published by the Karnataka Sangha, Central College, Bangalore.)

Prabhulingalile, by Chamarasa. (Published by the Lingayat Education Society, Dharwar.)

Paper II

Ramaswamedha, by Muddana: Asvasas 1-6. (Published by the Kavyamanjari Office, Mysore.)

1941-42-43

Paper I

Pampa Bharatha, Asvasa 13. (Government Central Book Depot, Bangalore.)

Dharmamritha, Asvasa 2. (Oriental Library, Mysore.)

Bhavachinthatra. (Kavyamanjari Series, Mysore.)

Paper II

Ramaswamedha, by Muddana, Asvasas 9-11. (Karnatakakavya Kalanidhi Series, Mysore.)

Basavaraja Devara Ragale, by Harihara. Ed. by T. S. Venkanthaiya. (Sathyasodhana Publishing House, Fort, Bangalore City.)

Mudrarakshasa, by Ramasesha Sastri. (Published by M. Srikanta Sastri, Fourth Road, Chamarajpet, Bangalore City.)

(C) TELUGU

1940-41-42

Mahabharatamu, by Nannayya, *Sabhaparvam*, Canto 2, Pp. 1-270.

Mahabharatamu, by Thikkana, *Bheeshmaparvam*, Canto. 1. *Sringara Nyshadhamu*, by Sreenatha, Canto 5.

Vanakumari, by D. Rami Reddy.

Dasakumara Charithramu, by V. Venkataraya Sastry.

Mallika Marutha Prakaranamu, by V. Subba Rayalu.

Telugu Kavyadarsamu, by A. Subrahmanya Sastry. (V. R. Sastrulu & Sons, Madras.)

1941-42-43

Andhra Mahabharatham, by Nannayya, *Sabhaparvam*, Canto. 2, vv. 1-270.

Andhra Mahabharatham, by Thikkana, *Bheeshmaparvam*, Canto. 1

- Sringara Nyshadhamu*, by Sreenatha, Canto. 5.
Vanakumari, by D. Rami Reddy.
Dasakumara Charithramu, by V. Venkataraya Sastry.
Mallika Marutha Prakaranamu, by V. Subba Rayalu.
Telugu Kavyadarsamu, by A. Subrahmanya Sastry. (V. R. Sastrulu & Sons, Madras.)

(D) SANSKRIT*

1940-41-42

(a) *Sahitya—Classical Literature and Criticism*

- Kadambari*, Ed. P. L. Vaidya. (Oriental Book Agency, Poona.) Pp. 134-176.
Meghaduta of Kalidasa.
Mudra-Rakshasa.
Kavyalankara-Sutra-Vritti of Vamana—omitting the fifth Adhikarana.
Siddhanta Kaumudi : Samjna, Paribhasha and Karaka Prakaranas.

(b) *Vedic Studies*

- Hymns from the Rigveda*. Ed. Peterson. (Bombay Sanskrit Series No. XXXVI, Sixth Edition, 1937.) The first eight suktas.
Aitareya-Brahmana, Chapter XXXIII.
Gautama Dharmasutra. The first thirteen Chapters. (Anandasrama Series.)

1941-42-43

(a) *Sahitya—Classical Literature and Criticism*

- Kadambari*, Ed. P. L. Vaidya. (Oriental Book Agency, Poona.) Pp. 134-176.
Kiratarjuniya of Bharavi. Cantos I and II. (Nirnaya Sagar Press.)
Mudra-Rakshasa of Visakhadatta.
Chandraloka of Jayadeva (the whole). (Gujarati Printing Press, Fort, Bombay.)
Siddhanta Kaumudi : Samjna, Paribhasha and Karaka Prakaranas.

* *Note*.—Books against which the names of publishers are not mentioned can be had from the Oriental Book Agency, Sukrawarpet, Poona City.

(b) *Vedic Studies*

Hymns from the Rigveda. Ed. Peterson. (Bombay Sanskrit Series, No. XXXVI, Sixth Edition, 1937.) The first eight suktas.
Aitareya-Brahmana, Chapter XXXIII. (Anandasrama Series.)
Gautama Dharmasutra. (Anandasrama Series.) The first thirteen Chapters.

(E) URDU†

1940-41-42

Prose

Mazamin-e-Chakbast
Ifadat-e-Mahdi.
Tamsili Musha-irah.

Poetry

Bali-jibrai'l.
Alame-khiyal, by Shaiq Qudwai.
Muntakhabat-i-Kalam-i-Galib.

History of Literature

Tarikh-e-adabi, Urdu.

Grammar

Qawaed Urdu.

Hindi under the note on page 188 of this Calendar:—

Hindi-English Self-Instructor, by Sathyanarayana.

Hindi Padyavali.

Hazarat Mahammad, by Sunderlal.

1941-42-43

Prose

Mazamin-e-Chakbast.
Ifadat-e-Mahdi.
Tamsili Musha-irah.

Poetry

Masnavi-e-Mir Hasan.

Qasaed-e-Zauk, by Dr. Shah Sulaiman (first six Qasidas).

Muntakhabat-e-kalam-e-Ghaleb.

Iqbal's Tasweer-e-Dard.

† Note.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubark Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

Shama-o-Sha'er.
Khizar-e-rah.
Tulu-e-Islam.

History of Literature and Language

Tarikh-e-Adab-e-Urdu, by Saksena.
Abe-Hayat. (Portion: Introduction.)

Grammar

Qawaed-e-Urdu.

Hindi

Compulsory Hindi as a part of Optional Urdu for B.A. Degree Examination, 1943.

Hindi-English Self-Instructor.

Hazrat Mohammad, Sunderlal.

Chune Hue Mazmoon (pp. 1-50). Published by the Dakshina Bharat Hindi Prachar Sabha, Madras.

(F) PERSIAN*

1940-41-42

Prose

Dastani Krishna.

Faraidi-Farsi, Prose Selections, by Dr. Nizamuddin, Hyderabad.

Chahar Maqala, first two maqalas.

Poetry

Fraid-i-Farsi: Poetical Selections, by Dr. Nizamuddin.

Pascha Bayad Kard ba Akhwani Shaikh, by Iqbal.

History of Literature

Shirul Ajam, Parts I and II.

Browne's Literary History of Persia.

1941-42-43

Prose

Dastan-e-Krishna, first half.

Akhlaq-e-Naseri, first 75 pages.

Chahar-Maqala, first two maqalas.

Abul Fazal Daftar, first 10 pages.

* Note.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

*Poetry**Qasaed-e-Urfi*, first 5 Qasidas.*Naziri* (odes), first 30 odes.*Khusroe: Qiranus*—Saidain, first 60 pages.*Umar Khayyam*, first 20 pages (Navil Keshvar Press).*History of Literature**Sherul-Ajam*, first and second parts.*History of Persian Literature*, by E. G. Browne, Vol. IV.

(G) ARABIC*

1940-41-42

*Prose**Maqmat-e-Hariri*, Maqam 4, 9, 13, 19.*Quran*: Sura, Taha and Mulk.*Tari-khul-Khulafa*: First 100 pages.*Ibne-e-Batutah*: First half of First Volume.*Poetry**Moallquat-Zohair*.*Diwane-Mutanabbi-Radif Alif and Bey*.

1941-42-43

*Prose**Maqmat-e-Hariri*, Maqam 4, 9, 13, 19.*Quran*: Sura, Taha and Malik.*Tari-khul-Khulafa*: First 100 pages.*Ibne-e-Batutah*, First half of First Volume.*Poetry**Moallquat-e-Zohair*.*Diwane-Mutanabbi-Radif Alif and Bey*.

* *Note*.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

(H) HINDI

1940-41-42

Poetry

Tulsidas: *Ayodhyakand* (abridged). *Tulsi Ramayana* (abridged). Edited by Pandit Ramananda Sharma, pp. 158-232, *Ayodhyakhand* only. (D. B. H. P. S., Madras.)

Chayanika (pp. 1-77). Compiled and edited by Ramananda Sharma and Brajanandan Sharma. (D. B. H. P. S., Madras.)

Prose and Drama

Galpasansaramala (Hindi). (Saraswati Press, Benares.) (D. B. H. P. S., Madras.)

Tagore's *Ankhee Kirkiri*. Translated by R. Pandeya. (Hindi Grantharatnakara Karyalaya, Bombay.)

Drama

Saty Harischandra, by Bharatendu. (Indian Press, Allahabad.)

Books Recommended for Study

Hindi Bhasha aur Sahitya (2nd edition), by Shyam Sunder Das. (Indian Press, Allahabad.)

Hindi Bhashaka Itihas (1938 Edition), by Ramachander Shukla. Nagari Pracharini Sabha, Benares.

Hindiki Gadyashailika Vikas, by J. P. Sharma. (Nagari Pracharini Sabha, Benares.)

Hindi, by Balakrishna Bhatt. (Ganga Pustakagar, Lucknow.)

1941-42-43

Poetry

Tulsi Ramayana (abridged), edited by Pandit Ramananda Sharma. *Ayodhyakand* only (pp. 158-232). (D. B. H. P. S., Madras.)

Adhunik Hindi Kavya, edited by Dr. Dheerendra Varma and Prof. Ramkumar Varma. (Saraswati Publishing House, George Town, Allahabad, 1939.)

The following poets only

Maithilisharan Gupta.

Makhanlal Chaturvedi.

Sreemati Subhadra Kumari Chauhan.

Prose

Galpasansaramala (Hindi). (Saraswati Press, Benares.)

Ankhkee Kirkiri, Rabindranath Tagore. Translated by Roopnarayana Pandeya. (Hindi Grantharatnakar Karyalaya, Bombay.)

Drama

Shakuntala-Nataka, translated by Raja Lakshmana Simha. (Indian Press, Allahabad.)

Books Recommended for Study

Hindi Bhasha aur Sahitya, by Shyam Sunder Das. (Indian Press, Allahabad.)

Hindi Sahitya Itihas, by R. C. Shukla. (Nagari Pracharini Sabha, Benares.)

Hindiki Gadyashailika Vikas, by Jagannath Prasad Sharma. (Nagari Pracharini Sabha, Benares.)

Hindi, by Balakrishna Bhatt. (Ganga Pustakagar, Lucknow.)

D. B.A. (Hons.) Degree Examination**I. COMPULSORY ENGLISH****PRELIMINARY EXAMINATION**

Text-books are the same as those prescribed for the B.A. Degree Examination.

II. SECOND LANGUAGE**(A) KANNADA**

Text-books are the same as those prescribed for the B.A. Degree Examination.

(B) TELUGU

Text-books are the same as those prescribed for the B.A. Degree Examination.

(C) TAMIL

Text-books are the same as those prescribed for the B.A. Degree Examination.

(D) SANSKRIT

Text-books are the same as those prescribed for the B.A. Degree Examination.

(E) URDU

Text-books are the same as those prescribed for the B.A. Degree Examination.

(F) PERSIAN

Text-books are the same as those prescribed for the B.A. Degree Examination.

(G) ARABIC

Text-books are the same as those prescribed for the B.A. Degree Examination.

III. OPTIONAL SUBJECTS

(A) ENGLISH

PRELIMINARY EXAMINATION

Minor Subject

1940-41-42

(i) KANNADA LITERATURE

Paper I

Kavirajamarga (1-60). (Published by the Madras University.)

Adipurana (Asvasa 9). (Published by the Oriental Library, Mysore.)

Gayayuddhanataka. (Published by the Karnataka Sangha, Central College, Bangalore.)

Yasodharacharite. (Published by the Kavyamanjari Office, Mysore.)

Paper II

Basaveswara Vachanagalu: Bhaktisthala, pages 1-78. (Edited and published by P. G. Halakatti, Bijapur.)

Basavaraja Devara Ragale: Edited by T. S. Venkannaiya. (Copies can be had of Karnataka Sangha, Central College, Bangalore.)

Jagannatha Vijaya (Asvasa 1). (Published by the Oriental Library, Mysore.)

Jaimini Bharatha, by Lakshmisa: Pitikha Sandhi and Sandhis 8 and 9. (Published by Kodandarama Setty & Co., Mysore.)

Note.—A general idea of the History of Kannada Literature will be expected, based on the prefaces and the lives of the prescribed authors in R. Narasimhachar's *Kavi Charite*, Vols. I—III.

(ii) URDU LITERATURE

Tanqidi-Maqalat.

Maquaddamat-i-Abdul Haq.

(iii) PERSIAN LITERATURE

Quissai-Haji Baba Isfahani (first 150 pages.)

(iv) SANSKRIT LITERATURE

Bhasakathasara, by Mahalinga Sastry, pp. 1-20.*Buddhacharita* of Asvaghosha: Canto I.*Pratima Nataka* of Bhasa.

(v) POLITICS

Special Period

Political Thought in England since Bentham.

*Prescribed Text.*Mill: *Representative Government*.

1941-42-43

(i) KANNADA LITERATURE

*Paper I**Kavirajamarga*, pp. 1-60. (Published by the Madras University.)*Adipurana* (Asvasa 9). (Published by the Oriental Library, Mysore.)*Gadayuddhanataka*. (Published by the Karnataka Sangha, Central College, Bangalore.)*Yasodharacharite*. (Published by the Mysore University.)*Paper II**Basaveswara Vachanagalu: Bhaktisthala*, pages 1-78. (Edited and published by P. G. Halakatti, Bijapur.)*Basavaraja Devara Ragale*: Edited by T. S. Venkannaiya. (Copies can be had of Karnataka Sangha, Central College, Bangalore.)*Jagannatha Vijaya* (Asvasa 1). (Published by the Oriental Library, Mysore.)*Jaimini Bharatha*, by Lakshmis, Pitikha Sandhi and Sandhis 8 and 9. (Published by Kodandarama Setty & Co., Mysore.)

Note.—A general idea of the History of Kannada Literature will be expected, based on (1) the prefaces, and the lives of the prescribed authors in R. Narasimhachar's *Kavi Charite*, Vols. I-III and (2) his *Lectures on the History of Kannada Literature*. (Published by the Mysore University.)

(ii) URDU LITERATURE

Zindagi, by Choudri Afzal Haq.

(iii) PERSIAN LITERATURE

Will be announced later.

(iv) SANSKRIT LITERATURE

Bhasakathasara, by Mahalinga Sastry, pages 1-20.

Buddhacharita of Aswaghosha, Canto I.

Pratima Nataka of Bhasa.

(v) POLITICS

Special Period

Political Thought in England since Bentham.

Prescribed Text

Mill: *Representative Government*.

FINAL EXAMINATION

Major Subject

1939-40-41-42

(i) CHAUCER AND THE HISTORY OF THE ENGLISH LANGUAGE

(A) CHAUCER

The Prologue. * *The House of Fame*, Book III. *

(B) HISTORY OF THE ENGLISH LANGUAGE

Books Recommended

Bradley: *The Making of English*.

Emerson: *History of the English Language*.

Jespersen: *Growth and Structure of the English Language*.

(ii) HISTORY OF ENGLISH LITERATURE

Text-Book

Strong: *Short History of English Literature*.

(iii) ELIZABETHAN DRAMA

Richard II. *Twelfth Night*. *Macbeth*. * *The Tempest*.
Dr. *Faustus*. *Every Man in His Humour*.

* Detailed knowledge is required of these books.

(iv) ELIZABETHAN PROSE AND POETRY

Spenser: *Fairie Queene*, Book I.

Young, W. T.: *Anthology of the Age of Shakespeare*.

Ascham: *The Scholemaster*.

Sidney: *Apologie for Poetrie*.

Bacon: *Essays**: Nos. 1, 2, 5, 6, 11, 14, 17, 18, 20, 23, 25 and 27. Edited by Matheson. (O.U.P.)

(v) POST-ELIZABETHAN LITERATURE

First Period

Milton: *Paradise Lost*, Book II.*

Dryden: *Absalom and Achitophel*, Part I.

Golden Treasury, Book II.

Pope: *Epistle to Dr. Arbuthnot*.

English Prose

Wycliffe to Clarendon. World's Classics. The following authors:—

Burton, Hobbs, Selden, Walton, Earle, Browne and Fuller.
Milton: *Areopagitica*.

Dryden: *Essay of Dramatic Poesy*.*

Addison: *Selections*. Ed. Lobban (C.U.P.)

Swift: *The Battle of the Books*.*

Burke: *American Speeches*. Ed. Cavanaugh. (Bell & Sons.)

Johnson: *Life of Milton*.*

Goldsmith: *She Stoops to Conquer*.

(vi) POST-ELIZABETHAN LITERATURE

Second Period

Wordsworth: *Arnold's Selections*: Golden Treasury Series.

Byron, Keats, Shelley and Coleridge, in *Golden Treasury*, Book IV.

Byron: *Childe Harold*, Canto IV.*

Shelley: *Adonais*.* Prometheus Unbound.

Jane Austen: *Pride and Prejudice*.

Scott: *Guy Mannering*.

Lamb: *Essays of Elia*.* First Series.

De Quincey: *Revolt of the Tartars*.

Coleridge: *Biographia Literaria*, and *Wordsworth's Prefaces*.
Ed. by Sampson. (C. U. P.)

* Detailed knowledge is required of these books.

(vii) POST-ELIZABETHAN LITERATURE

Third Period

Tennyson: *Oenone*.* *Ulysses*. *Morte d'Arthur*. *Ode on the Death of the Duke of Wellington*. *The Lotos Eaters*.

Browning: *Saul*.* *The Grammarian's Funeral*.* *Cleon*. *Rabbi Ben Ezra*.

J. C. Smith: *A Book of Modern Verse*. (O.U.P.)

Carlyle: *Essay on Burns*.*

Ruskin: *Seasame and Lilies*.

Thackeray: *Vanity Fair*.

Hardy: *The Return of the Native*.

Meredith: *The Ordeal of Richard Feverel*.

Arnold: *Essays in Criticism*. First Series.

Twentieth Century Essays and Addresses. Ed. by Archbold.

(Longmans.)

Newman: *Literary Selections*.* (Longmans.)

Arnold: *Thyrsis*.* *The Scholar Gipsy*.*

(viii) COMPARATIVE DRAMA

Agamemnon, *Oedipus Tyrannus*, *The Frogs*, *Sakuntala*, and the English dramas prescribed above.

1940-41-42-43

(i) CHAUCER AND THE HISTORY OF THE ENGLISH LANGUAGE

(a) Chaucer

The Prologue.* *The House of Fame*, Book III.*

(b) History of the English Language.

Books Recommended.

Bradley: *The Making of English*.

Greenough and Kittredge: *Words and their Ways in English Speech*.

Breal: *Studies in the Science of Meaning*.

Jespersen: *Growth and Structure of the English Language*.

(ii) HISTORY OF ENGLISH LITERATURE

Text-book

Strong: *Short History of English Literature*.

* Detailed knowledge is required of these books.

(iii) ELIZABETHAN DRAMA

Richard II. Twelfth Night. Macbeth. The Tempest.*
Dr. Faustus. Every Man in His Humour.

(iv) ELIZABETHAN PROSE AND POETRY

Spenser: *Fairie Queene*, Book I.
 Young, W. T.: *Anthology of the Age of Shakespeare*.
 Lily: *Euphues*.
 Sidney: *Apologie for Poetrie*.
 Bacon: *Essays**: Nos. 1, 2, 5, 6, 11, 14, 17, 18, 20, 23.
 25, and 27. Edited by Matheson. (O.U.P.)

(v) POST-ELIZABETHAN LITERATURE

First Period

Milton: *Paradise Lost*, Book II.*
 Dryden: *Absalom and Achitophel*, Part I.
Golden Treasury, Book II.
 Pope: *Epistle to Dr. Arbuthnot*.
 Browne: *Hydriotaphia*.
 Congreve: *The Way of the World*.
 Milton: *Areopagitica*.
 Dryden: *Essay of Dramatic Poesy*.
 Addison: *Selections*. Ed. Lobban. (C.U.P.)
 Swift: *Gulliver's Travels*.
 Burke: *American Speeches*. Ed. Cavanaugh. (Bell & Sons.)
 Johnson: *Life of Milton*.
 Goldsmith: *She Stoops to Conquer*.

(vi) POST-ELIZABETHAN LITERATURE

Second Period

Wordsworth: *Arnold's Selections*. Golden Treasury Series.
 Byron, Keats, Shelley and Coleridge, in *Golden Treasury*,
 Book IV.
 Byron: *Childe Harold*, Canto IV.*
 Shelley: *Adonais*.
 Prometheus Unbound.
 Jane Austen.: *Pride and Prejudice*.
 Scott: *Guy Mannering*.
 Lamb: *Essays of Elia*.
 First Series.
 De Quincey: *Revolt of the Tartars*.
 Coleridge: *Biographia Literaria and Wordsworth's Prefaces*.
 Ed. Sampson. (C.U.P.)
 Blake: *Songs of Innocence and Experience*.

* Detailed knowledge is required of these books.

(vii) POST-ELIZABETHAN LITERATURE

Third Period

Tennyson: *Oenone*.^{*} *Ulysses*. *Morte d' Arthur*. *Ode on the Death of the Duke of Wellington*. *The Lotos Eaters*.

Browning: *Saul*.^{*} *The Grammarian's Funeral*.^{*} *Cleon*. *Rabbi Ben Ezra*.

Carlyle: *Essay on Burns*.^{*}

Ruskin: *Sesame and Lilies*.

Thackeray: *Vanity Fair*.

Hardy: *The Return of the Native*.

Merèdith: *The Ordeal of Richard Feverel*.

Arnold: *Essays in Criticism*. First Series.

Twentieth Century Essays and Addresses. Ed. Archbold. (Longmans.)

Newman: *Literary Selections*.^{*} (Longmans.)

Arnold: *Thyrsis*.^{*} *The Scholar Gipsy*.^{*}

Parsons: *Progress of Poetry*. (Henley, Bridges, Hopkins, Yeats, de la Mare Lawrence, Eliot, Auden.)

(viii) COMPARATIVE DRAMA

Agamemnon, *Oedipus Tyrannus*, *The Frogs*, *Sakuntala*, and the English Dramas prescribed above.

1941-42-43-44

I. CHAUCER AND THE HISTORY OF THE ENGLISH LANGUAGE

Chaucer: *The Prologue*. *The House of Fame*, Book III.

HISTORY OF THE ENGLISH LANGUAGE:

Books Recommended

Wyld: *Modern Colloquial English*.

Bradley: *The Making of English*.

Jespersen: *Growth and Structure of the English Language*.

Breal: *Study of Semantics*.

II. HISTORY OF ENGLISH LITERATURE

Text-Book

Strong: *Short History of English Literature*.

III. ELIZABETHAN DRAMA

Richard II. *Twelfth Night*. *Macbeth*. *The Tempest*. *Dr. Faustus*. *Every Man in His Humour*.

* Detailed knowledge is required of these books.

IV. ELIZABETHAN PROSE AND POETRY

Book of Job. Authorised Version.

Spenser: *Fairie Queene*, Book I.

Young, W. T.: *Anthology of the Age of Shakespeare*.

Lyly: *Euphues*.

Sidney: *Apologie for Poetrie*.

Bacon: *Essays*: Nos. 1, 2, 5, 6, 11, 14, 17, 18, 20, 23, 25 and 27. Edited by Matheson. (O.U.P.)

V. POST-ELIZABETHAN LITERATURE

First Period

Milton: *Paradise Lost*, Book II.

Dryden: *Absalom and Achitophel*, Part I.

Golden Treasury, Book II.

Pope: *Epistle to Dr. Arbuthnot*.

Browne: *Hydriotaphia*.

Congreve: *The Way of the World*.

Milton: *Areopagitica*.

Dryden: *Essay of Dramatic Poesy*.

Addison: *Selections*, Ed. Lobban. (C.U.P.)

Swift: *Gulliver's Travels*.

Gibbon: *Age of the Antonines*.

Johnson: *Life of Milton*.

Goldsmith: *She Stoops to Conquer*.

VI. POST-ELIZABETHAN LITERATURE

Second Period

Wordsworth: *Arnold's Selections*. Golden Treasury Series.

Byron, Keats, Shelley and Coleridge, in *Golden Treasury*, Book IV.

Byron: *Vision of Judgment*. (O.P.T.)

Shelley: *Adonais*. *Prometheus Unbound*.

Jane Austen: *Pride and Prejudice*.

Lamb: *Essays of Elia*, First Series.

De Quincey: *Revolt of the Tartars*.

Coleridge: *Biographia Literaria and Wordsworth's Prefaces*. Ed. Sampson. (C.U.P.)

Blake: *Songs of Innocence and Experience*.

Scott: *Bride of Lammermoor*.

Shelley: *Defence of Poetry*.

VII. POST-ELIZABETHAN LITERATURE

Third Period

Tennyson: *Oenone. Ulysses. Morte d'Arthur. Ode on the Death of the Duke of Wellington. The Lotos Eaters.*

Browning: *Saul. A Grammarian's Funeral. Cleon. Rabbi Ben Ezra.*

Carlyle: *Sartor Resartus.*

Ruskin: *Sesame and Lilies.*

Thackeray: *Vanity Fair.*

Hardy: *The Return of the Native.*

Meredith: *The Ordeal of Richard Feverel.*

Arnold: *Essays in Criticism. First Series.*

Newman: *Literary Selections. (Longmans.)*

Arnold: *Thyrsis. The Scholar Gipsy.*

Parsons: *Progress of Poetry. (Henley, Bridges, Hopkins,*

Yeats, de la Mare, Lawrence, Eliot, Auden.)

VIII. COMPARATIVE DRAMA

Agamemnon, Oedipus Tyrannus, The Frogs, Sakuntala, and the English Dramas prescribed above.

(B) KANNADA

PRELIMINARY EXAMINATION

Minor Subject

(i) Telugu

1940-41-42

Andhra Mahabharatham, Karnaparvamu: Canto 2, vv. from 1 to 109.

Basavapuramamu, by Palkurki Somanatha: Canto 4, Story of Siriyala, pages 115 to 127.

Amuktha Malyada, Canto 6, vv. 1 to 46.

Harischandranalopakhyanamu, Canto 3, vv. 1 to 32.

Prathimanatakamu, Translated by V. Prabhakara Sastry. (V. R. Sastrulu & Sons, Madras.)

Natakopanyasamulu, First Essay, by R. Ananthakrishna Sarma, Krishnamoorthipuram, Mysore.

1941-42-43

Andhra Mahabharatham, Karnaparvamu, Canto 2, vv. 1 to 109.

Basavapuramamu, by Palkurki Somanatha: Canto 4, Story of Siriyala, pages 115 to 127.

Manucharithramu, Canto 4, vv. 1 to 55 (inclusive).

Raghava Pandaveeyamu, by Sooranna, Canto 2, vv. 14 to 50 (inclusive).

Prathimanatakamu, Translated by V. Prabhakara Sastry. (V. R. Sastrulu & Sons, Madras.)

Natakopanyasamulu, First Essay, by R. Ananthakrishna Sarma, Krishnamoorthipuram, Mysore.

(ii) *Tamil*

1940-41-42

Poetry

Kambaramayanam, *Ayodhyakandam*, *Kaikeyisulvinaippadalam*.

Thiruvengkathandadi, by Pillai Perumaliengar.

Kural, Chapters 11-20.

Prose

Tamil Varalaru, Parts I and II, by K. S. Srinivasapillai. (Kamakshi Ammal Press, Kumbhakonam.)

Grammar

Balabodha Ilakkanam. (V. Ramaswami Sastrulu's edition.)

1941-42-43

Nalavenba: Kaliningukandam.

Kural, Chapters 21 to 30.

Periyar Varalaru, by Suddhananda Bharati, Malai 6, Chapters 46 to 53. (Niranjanananda Swami, Ramanashram, Tiruvannamalai.)

Tamil Varalaru, Parts I and II, by K. S. Srinivasa Pillai. (Kamakshi Ammal Press, Kumbhakonam.)

Balabodha Ilakkanam. (V. Ramaswami Sastrulu's edition.)

FINAL EXAMINATION

Major Subject

1939-40-41-42

(i) KANNADA

(a) *Jaina Literature*

Pampa Bharatha, Asvasas 6 to 8.

Chandraprabha Purana, by Aggala (whole). (Kavya Manjari Series.)

Lilavathi, by Nemichandra. Edited by K. G. Kundangar.

Dharmamritha, by Nayasena, Asvasas 10 to 12. (Mysore Oriental Library Publication.)

(b) *Virasaiva Literature*

Vachanas of Sakalesa Madarasa and Ambigara Chowdayya.
 Edited by P. G. Halakatti.

Ragales of Harihara, Vol. 5. Edited by P. G. Halakatti.

Pampasathaka, by Harihara.

Rajasekhara Vilasa, by Shadakshari, Asvasas 12 to 14.

(c) *Brahmana Literature*

Panchatantra, by Durgasimha: Tantra 2. (Kavyamanjari Series.)

Jaganmatha Vijaya, by Rudrabhatta: Asvasas 1 to 4. (Mysore Oriental Library Publication.)

Bharatha, by Kumara Vyasa: *Dronaparva*. (Mysore Oriental Library Publication.)

Kantiravanarasaraja Vijaya, by Govinda Vaidya (whole). (Mysore Oriental Library Publication.)

(d) *Prosody, Rhetoric and Grammar*

Kannada Kaipidi, Vol. I.

Bhasha Bhushana.

Kavyavalokana.

Sabdamanidarpana.

Chandombudhi.

Kavicharite, Vols. I-III.

History of Kannada Language, by R. Narasimhachar. (Mysore University Publication.)

Studies in Dravidian Philology, by K. Ramakrishnaiah. (Madras University Publication.)

Kittel's Grammar.

(ii) SANSKRIT

Dasakumaracharita. Edited by M. R. Kale. Third Edition, Chapter III, pp. 102-117.

Raghuvamsa, Canto XIV.

Svapnavasavadatta of Bhasa.

Kale's Smaller Sanskrit Grammar.

1940-41-42-43

(i) KANNADA

(a) *Jaina Literature*

Pampa Bharatha, Asvasas 11-14. (Published by the Kannada Sahitya Parishat, Bangalore City.)

Ajitapurana, by Ranna. (Kavyamanjari Series, Mysore.)

Lilavathi, by Nemichandra. Edited by K. G. Kundangar, Kolhapur.

Kabbigara Kava, by Andayya. (Kavyamanjari Series, Mysore.)

(b) *Virasaiva Literature*

Prabhudevara Vachanagalu. Edited by P. G. Halakatti, Bijapur.)

Mahadeviyakkana Ragale. (Published by Sri Channamallappa, Haveri.)

Pampasathaka by Harihara. (Kavyamanjari Series.)

Sabarāsankara Vilasa, by Shadakshara Deva. (Published by Lingayet Education Society, Dharwar.)

(c) *Brahmana Literature*

Abhinavadasakumaracharitha, by Choundarasa. Asvasas 6-8. (Kavyamanjari Series, Mysore.)

Jagannatha Vijaya, by Rudrabhatta. Asvasas 1-4. (Mysore Oriental Library Publication.)

Bharatha, by Kumara Vyasa: *Bhishma Parva*. (Mysore Oriental Library Publication.)

Chikkadevarayavamsavali, by Thirumalarya. (Kavyamanjari Series, Mysore.)

(d) *Prosody, Rhetoric and Grammar*

Kannada Kaipidi, Vol. I.

Bhasha Bhushana.

Kavyavalokana.

Sabdamanidarpana.

Chandombudhi.

Kavicharite, Vols. I-III.

History of Kannada Language, by R. Narasimhachar. (Mysore University Publication.)

Studies in Dravidian Philology, by K. Ramakrishnaiah. (Madras University Publication.)

Kittel's Grammar.

(ii) SANSKRIT

Dasakumaracharitha. Edited by M. R. Kale. Third Edition. Chapter III, pp. 102-117.

Raghuvamsa, Canto XIV.

Svapnavasavadatta of Bhasa.

Kale's Smaller Sanskrit Grammar.

1941-42-43-44

(a) *Jaina Literature*

Pampa Bharatha, Asvasas 11-14. (Government Central Book Depot, Bangalore.)

Ananthanathapurana, by Janna. Asvasas 11-14. (Oriental Library, Mysore.)

Neminathapurana, Asvasas 6-8. (Kavyamanjari Series, Mysore.)

Voddaradhana. The first three stories, by Sivakotyacharya. (Kannada Sahitya Parishat, Bangalore City.)

(b) *Veerasaiva Literature*

Sunyasampadane, Sections 1, 2, 4, 6, 15, 17 and 18. Edited and published by P. G. Halakatti, Bijapur.

Harihara Ragale, Vol. I. Edited and published by P. G. Halakatti, Bijapur.

Prabhudevara Purana, by Yelandur Hariswarakavi, Sandhi 7. Published by B. M. Puranik, Dharwar.

Sabarasankaravilasa, by Shadakshari. Published by Lingayet Education Society, Dharwar.

(c) *Brahmana Literature*

Abhinavadasakumaracharitha, by Choundarasa, Asvasas 6-8. (Kavya Kalanidhi Series, Mysore.)

Haribhakthi Sudhe, by R. R. Divakar, Hubli.

Bharatha, by Kumaravyasa: *Karna Parva*. Published by the Oriental Library, Mysore.

Chikkadevaraja Binnapa, by Chikadevaraja Wodeyar. (Kavya Kalanidhi Series, Mysore.)

(d) *Prosody, Rhetoric and Grammar*

Kannada Kaipidi, Vol. I.

Bhasha Bhushana.

Kavyavalokana.

Sabdamanidarpana.

Chandombudhi.

Kavicharite, Vols. I-III.

History of Kannada Language, by R. Narasimhachar. (Mysore University Publication.)

Studies in Dravidian Philology, by K. Ramakrishnaiah.
(Madras University Publication.)

Kittel's *Kannada Grammar*.

Lectures on History of Kannada Literature, by R. Narasimhachar.

(ii) SANSKRIT

1941-42-43-44

Vemabhupalacharita Sangraha.

Raghuvamsa: Canto XIV. (Nirnaya Sagar Press.)

Malavikagnimitra of Kalidasa.

Kale's *Smaller Sanskrit Grammar*.

(C) SANSKRIT*

PRELIMINARY EXAMINATION

Minor Subject

1940-41-42

Kādambari. Edited by P. L. Vaidya. (Oriental Book Agency, Poona). Pp. 134-176.

Meghaduta of Kalidasa.

Mudra-Rakshasa.

Kavyalankara Sutravritti of Vamana: Omitting the fifth Adhikarana.

Siddhanta Kaumudi: Samjna, Paribhasha and Karaka Prakaranas.

1941-42-43

Kadambari of Bana. Edited by P. L. Vaidya. (Oriental Book Agency, Poona.) Pp. 134-176.

Kirtarjuniya of Bharavi, Cantos I and II. (Nirnaya Sagar Press.)

Mudra-Rakshasa of Visakhadatta.

Chandraloka of Jayadeva (the whole). (Gujarati Printing Press, Fort, Bombay.)

Siddhanta Kaumudi: Samjna, Paribhasha and Karaka Prakaranas.

* Note.—Books against which the names of publishers are not mentioned can be had from the Oriental Book Agency, Sukrawarpet, Poona City.

FINAL EXAMINATION

Major Subject

1939-40-41-42

Macdonell: *Vedic Reader*, Suktas 1-8.*Aitareya Brahmana*, 33rd Chapter.*Ramayana* (Published by R. Narayanaswami Aiyar, Advocate, Mylapore, Madras.) *Ayodhyakanda*, Sargas 7-14 (both inclusive).*Mahabharata*. Edited by T. R. Krishnacharya and T. R. Vyasacharya, Kumbakonam. *Santiparva*, *Mokshadharma Parva*: Chapters 265-272 (both inclusive).*Apastamba-Dharma-Sutra*. First 17 Kandas in Prasna I.*Nyayasutra* of Gautama with Viswanatha Panchanana's Vritti. First two Chapters.*Tarkasamgraha* with *Nyayabodhini*.*Nyaya-Kusumanjali*, Stabaka I.*Kavyalankarasara* of Udbhata. (Gaekwad Oriental Series.)*Sahityadarpana*. First six chapters.*Siddhanta Kaumudi*. From the beginning to the end of Karaka.

Books Recommended for Study

Macdonell: *Vedic Grammar for Students*.Kaegi: *Rigveda*. Translated into English by Arrowsmith.Max Muller: *History of Ancient Sanskrit Literature*.Winternitz: *History of Indian Literature*, Vols I and II.Arnold: *Vedic Metre*.Bloomfield: *Religion of the Vedas*.*Cambridge History of India*: Vol. I. *Ancient India*.Chatterji: *Hindu Realism*.Keith: *Indian Logic and Atomism*.Max Muller: *Six Systems of Indian Philosophy*.S. C. Vidyabhushana: *History of Indian Logic*.*The Vaisesika Philosophy* according to the *Dasapadartha Sastra*. Chinese text with Introduction: English Translation and Notes by Ui.Whitney: *Sanskrit Grammar*.Tucker: *Introduction to the Natural History of Languages*.Vatakrishna Ghosh: *Linguistic Introduction to Sanskrit*.Dr. Gune: *Introduction to Comparative Philology*.Uhlenbeck: *Sanskrit Phonetics*.Keith: *History of Sanskrit Literature*. (Clarendon Press.)Keith: *Sanskrit Drama*.Winternitz: *Some Problems of Indian Literature*.

Macdonell: *India's Past*.

Masson-Oursel: *Ancient India and Her Civilization*.

Hiriyanna: *Outlines of Indian Philosophy*.

Kuppuswami Sastri: *Primer of Indian Logic*.

1940-41-42-43

Macdonell: *Vedic Reader*, Suktas 1-8.

Aitareya Brahmana: Chapter XXXIII.

Ramayana. (Published by R. Narayanaswami Aiyar, Advocate, Mylapore, Madras.) *Ayodhyakanda*, Sargas 7-14 (inclusive).

Mahabharata. Edited by T. R. Krishnacharya and I. R. Vyasacharya, Kumbakonam. *Santiparva*, Chapters 265-272 (inclusive).

Apastamba-Dharma-Sutra. First 17 Kandas in the first Prasna. *Nyayasutra* of Gautama, with Vatsyayana Bhashya: First

Adhyaya.

Tarkasangraha with Dipika.

Nyaya-Kusumanjali: Stabaka I.

Kavyalankarasara of Udbhata. (Gaekwad Oriental Series.)

Sahityadarpana: First six chapters.

Siddhanta Kaumudi. From the beginning to the end of Karaka Prakarana.

Books Recommended for Study

Macdonell: *Vedic Grammar for Students*.

Kaegi: *Rigveda*. Translated into English by Arrowsmith.

Max Muller: *History of Ancient Sanskrit Literature*.

Winternitz: *History of Indian Literature*, Vols. I and II.

Arnold: *Vedic Metre*.

Bloomfield: *Religion of the Vedas*.

Cambridge History of India: Vol. I. *Ancient India*.

Chatterji: *Hindu Realism*.

Keith: *Indian Logic and Atomism*.

Max Muller: *Six Systems of Indian Philosophy*.

S. C. Vidyabhushana: *History of Indian Logic*.

The Viseshika Philosophy according to the Dasapadartha Sastra. Chinese Text with Introduction. English Translation and Notes by Ui.

Whitney: *Sanskrit Grammar*.

Tucker: *Introduction to the Natural History of Languages*.

Vatakrishna Ghosh: *Linguistic Introduction to Sanskrit*.

Dr. Gune: *Introduction to Comparative Philology*.

Uhlenbeck: *Sanskrit Phonetics*.

Keith: *History of Sanskrit Literature*. (Clarendon Press.)

Keith: *Sanskrit Drama*.

Winternitz: *Some Problems of Indian Literature*.

Macdonell: *India's Past*.

Masson-Oursel: *Ancient India and Her Civilization*.

Hiriyanna: *Outlines of Indian Philosophy*.

Kuppuswami Sastri: *Primer of Indian Logic*.

1941-42-43-44

Vedic Reader, Macdonell. Suktas 1-8.

Aitareya Brahmana, Chapter XXXIII. (Anandasrama Series.)

Ramayana. (Published by R. Narayanaswami Aiyar, Advocate, Mylapore, Madras.) *Ayodhyakanda*, Sargas 15-25 (inclusive).

Mahabharata. (Edited by T. R. Krishnacharya and T. R. Vyasacharya, Kumbakonam.) *Santiparva*, Chapters 152-168 (inclusive).

Apastamba-Dharma-Sutra. First 17 Kandas in Prasna I.

Nyaya-Sutra of Gautama with Vatsyayana Bhashya. First Adhyaya.

Tarkasangraha with Dipika.

Nyaya-Kusumanjali, Stabaka I.

Kavyalankarasara of Udbhata (Gaekwad Oriental Series.)

Sahityadarpana of Visvanatha. First six chapters.

Siddhanta Kaumudi. From the beginning to the end of Karaka Prakarana.

Books Recommended for Study

Macdonell: *Vedic Grammar for Students*.

Kaegi: *Rigveda*. Translated into English by Arrowsmith.

Max Muller: *History of Ancient Sanskrit Literature*.

Winternitz: *History of Indian Literature*, Vols. I and II.

Arnold: *Vedic Metre*.

Bloomfield: *Religion of the Vedas*.

Cambridge History of India: Vol. I. *Ancient India*.

Chatterji: *Hindu Realism*.

Keith: *Indian Logic and Atomism*.

Max Muller: *Six Systems of Indian Philosophy*.

S. C. Vidhyabhushana: *History of Indian Logic*.

The Viseshika Philosophy according to the *Dasapadārtha Sastra*, Chinese text with Introduction. English Translation and Notes by U.

Whitney: *Sanskrit Grammar*.

Tucker: *Introduction to the Natural History of Language*.

Vatakrishna Ghosh: *Linguistic Introduction to Sanskrit*.

Dr. Gune: *Introduction to Comparative Philology*.

Uhlenbeck: *Sanskrit Phonetics*.

Keith: *History of Sanskrit Literature*. (Clarendon Press.)

Keith: *Sanskrit Drama*.

Winternitz: *Some Problems of Indian Literature*.

Macdonell: *India's Past*.

Masson-Oursel: *Ancient India and Her Civilization.*

Hiriyanna: *Outlines of Indian Philosophy.*

Kuppuswami Sastri: *Primer of Indian Logic.*

(D) PERSIAN*

PRELIMINARY EXAMINATION

Minor Subject

1940-41-42

Prose

Dastan-e-Krishna.

Faraid-i-Farsi. Prose portions.

Chahar Maqala. First 2 Maqalas.

Poetry

Faraid-i-Farsi. Poetical portions.

Pas che Bayad Kard, by Iqbal.

Drama and Fiction

Ustad-e-Pina duz. Whole.

Taiture-e-Zuhhak. Whole.

Jijak-Ali-Shah. Whole.

Rustom and Sohrab.

1941-42-43

Prose

Dastan-e-Krishna. First half.

Akhlaq-e-Nasari. (First 75 pages.)

Chahar Maqala. First 2 Maqalas.

Abul Fazal. Daftar First (First 10 pages).

Poetry

Qasaed-e-Urfi. First 5 Qasidas.

Naziri (Odes). First 30 Odes.

Khusreo Qiranus-Saidain. First 60 pages.

Umar Khayyam. First 20 pages.

Drama and Fiction

Rustam-o-Sohrab.

Ustad-e-Pina duz. Whole.

Qissae Haji Baba. First 100 pages.

Jasusi Cheast. First 107 pages.

* Note.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

FINAL EXAMINATION

Major Subject

1939-40-41-42

1. Modern Prose and Poetry

*Prose**Rahbare-e-Nizad-e-Nau.* Pages 1-119.*Dalefan-e-Tangistan.**Yaki-bud-va-yaki-nabud.**Poetry**Iraj-Mirza.* First Part.*Diwan-e-Eshqi.* First Part.*Diwan-e-Nasim-e-Shimal.* Last 100 pages.

2. Indo-Iranian Philology

Lectures by Professor.

3. Political History of Persia

Browne's *History of Literature*, Vols. III and IV. Portion: Political History.*General History*, by Husain Farhudi. Portion: History of Persia.

4. Outlines of Islamic Philosophy

History of Islamic Philosophy, by Dr. Boer. Tr. by Jones.*Metaphysics in Persian*, by Sir M. Iqbal (excluding portion on Sufism.)*Israr-ul-Hikam.* Portion on Wujud Ruh.

5. Sufism

Gulshan-e-Raz. Whole.*Masnavi of Rumi*: First Daftar, First 25 pages.

Do. Second Do.

Do. Sixth Do.

6. Elements of Avestan Literature

Gathas—Hymns 44 and 45. *Behistun Inscription*—Columns First and Second.

7. Elements of Arabic Literature

Al-Qiratul-Rashida. Part III.

1940-41-42-43

1. Modern Prose and Poetry

*Prose**Rahbare-e-Nizad-e-Nau.* Pages 1-119.*Daleran-e-Tangistan.**Yaki-bud-va-yaki-nabud.**Poetry**Iraj-Mirza.* First Part.*Diwan-e-Eshqi.* First Part.*Diwan-e-Nasim-e-Shimal.* First 100 pages.

2. Indo-Iranian Philology

Lectures by Professor.

3. Political History of Persia.

Browne's *History of Literature*, Vols. III and IV. Portion: Political History.*General History*, by Husain Farhudi. Portion: History of Persia.

4. . Outlines of Islamic Philosophy

History of Islamic Philosophy, by Dr. Boer. Tr. by Jones.*Metaphysics in Persian*, by Sir M. Iqbal (excluding portion on Sufism).*Israr-ul-Hikam.* Portion on Wujud Ruh.

5. Sufism

Gulshan-e-Raz. Whole.*Masnavi of Rumi*: First Daftar First 25 pages

Do. Second Do.

Do. Sixth Do.

6. Elements of Avestan Literature

Gathas—Hymns 44 and 45. *Behistun Inscription*—Columns First and Second.*Or**History of Islamic Sects.* Al-milal Van-nihal of Shahrastani.

7. Elements of Arabic Literature.

Al-Qiratul-Rashida. Part III.

1941-42-43-44

1. Modern Prose and Poetry

*Prose**Rahbare-e-Nizad-e-Nau.* Pages 1-119.*Daleran-e-Tangistan.**Yaki-bud-va-yaki-nabud.**Poetry**Iraj-Mirza.* First Part.*Diwan-e-Eshqi.* First Part.*Diwan-e-Nisim-e-Shimal.* First 100 pages.

2. Indo-Iranian Philology

Indo-Iranian Phonetics, by Gray. (Portion: Iranian Dialects.)

3. Political History of Iran

General History, by Husain Forhudi. (Portion: History of Iran.)*History of Persia*, by Sykes. Vol. I.

4. Outlines of Islamic Philosophy

History of Islamic Philosophy, by De Boer. Translation by Abi Hussain.

5. Sufism

Gulshan-e-Raz. (Whole.)*Masnavi of Rumi*: First Daftar. First 25 pages.

Do. Second Do.

Do. Sixth Do.

6. Elements of Avestan Literature

Gathas—Hymns 44 and 45.*Behistun Inscription*.—Columns First and Second.*Or*

History of Islamic Sects

Al-Milal van Nihal, by Sharastani.

7. Elements of Arabic Literature

Al-Qiratur Rashida. Part III.

(E) ARABIC*

PRELIMINARY EXAMINATION

Minor Subject

1940-41-42

*Classical Prose and Poetry**Prose**Maquamat-e-Hariri-Maqam*, 4, 9, 13, 19.*Quran*: Sura, Taha and Mulk.*Tari-khul-Khulafa*. First 100 pages.*Ibn-e-Batutah*. First half of First Volume.*Poetry**Moallqat-Zohair*.*Diwan-e-Mutenabbi-Radif Alif and Be*.*Modern Prose and Poetry*

(1815 to the present time)

*Prose**Rivayat Salahud-din*, by Najib Haddad.*Poetry**Diwan Shaikh Nasif Yazaji*. First 60 pages.

1941-42-43

*Classical Prose and Poetry**Prose**Maquamat-e-Hariri*. (Maqam 4, 9, 13, 19.)*Quran*: Sura, Taha and Mulk.*Tari-khul-Khulafa*. First 100 pages.*Ibn-e-Batutah*. First half of First Volume.*Poetry**Moallqat-e-Zohair*.*Diwan-e-Mutenabbi-Radif Alif and Bey*.

* *Note*.—Books against which the names of publishers are not mentioned can be had from one of the following firms:—

1. Shaik Mubarak Ali, Andarun-e-Lohari, Darwaza, Lahore.
2. Islamiya Book Depot, Kurnool.

Modern Prose and Poetry
(1815 to the present time.)

Prose

Rivayat Salahud-din, by Najib Haddad.

Poetry

Diwan Shaikh Nasif Yazaji. First 60 pages.

FINAL EXAMINATION

Major Subject

1939-40-41-42

Advanced Grammar: Palmer's *Arabic Grammar*.

Comparative Study of Semetic Philology: Wright's *Arabic Grammar*.

Outlines of Islamic Philosophy: *Alis-filsaftul Arabiyyahwal Akhlaq*. Parts I and II, by Sultan Mahomed Beig.

History of Islamic Civilization: *Tarikhut-Tammadun-ul-Islami*, by George Zaidan.

History of the Development of Islamic Sects: *Al-Milal-van Nihal* of Shahrستاني.

1940-41-42-43

Advanced Grammar: Palmer's *Arabic Grammar*.

Comparative Study of Semetic Philology: Wright's *Arabic Grammar*.

Outlines of Islamic Philosophy: *Alis-filsaftul Arabiyyahwal Akhlaq*. Parts I and II, by Sultan Mahomed Beig.

History of Islamic Civilization: *Tarikhut-Tammadun-ul-Islami*, by George Zaidan.

History of the Development of Islamic Sects: *Al-Milal-van Nihal* of Shahrستاني.

1941-42-43-44

Advanced Grammar: Palmer's *Arabic Grammar*.

Comparative Study of Semetic Philology: Wright's *Arabic Grammar*.

Outlines of Islamic Philosophy: *Alis-filsaftul Arabiyyahwal Akhlaq*. Parts I and II, by Sultan Mahomed Beig.

History of Islamic Civilization: *Tarikhut-Tammadun-ul-Islami*, by George Zaidan.

History of the Development of Islamic Sects: *Al-Milal-van Nihal* of Shahrستاني.

(F) URDU

PRELIMINARY EXAMINATION

Minor Subject

1940-41-42

ELEMENTARY KNOWLEDGE OF HINDI

Same as for B.A. Hindi second language.

ELEMENTARY KNOWLEDGE OF PERSIAN

Same as for B.A. Persian second language.

ELEMENTARY KNOWLEDGE OF ARABIC

Same as for B.A. Arabic second language.

HISTORY OF MUSLIM RULE IN INDIA

*Books for Reference**Sauda*, by Shaikh Chand.*Moghul aur Urdu*.*Qarn-e Wasta ka Hindustani*. Tamuddan by Pandit Gauri-Shankar Hirachand Ujha. (Translation by Premachand.)*Gul-e-Renta*. Portion: Historical.

FINAL EXAMINATION

Major Subject

1940-41-42-43

I. HISTORY OF URDU LANGUAGE AND LITERATURE

(with special reference to a comparative study of Indo-Aryan Dialects.)

Tarikh-e-adab-e-Urdu, by Babu Saksena. (Trans. in Urdu.)*Urdu Lisaniyyat*, by Dr. Zore.*Indo-Iranian Phonology*, by Gray. (Portion: Indian Dialects.)

II. URDU POETRY

Sauda, by Muttaleb Hussain. (Portion: Qassid, pages 90-115.)*Ghaleb*. Portion: Ghazal radif ye.*Gulzar-e-Nasim*.*Ruh-e-Anis*. (Portion: Pages 176-236.)*Jam-e-Tahur*. (Portion: 21-36 and 155-171.)

III. LITERARY CRITICISM

Mareka-e-chakbast.

Nazme-e-Urdu, by Azad Lakhnavi.

Surma-e-Tahqiq.

Methods and Materials of Criticism, by Gayley and Scott.

IV. DRAMA AND FICTION

Sakuntala. Translation.

Faust. Translation.

Khudai-faujdar.

V. PROSE

Any one of the following:—

(a) Prose before 1857:

(1) *Fasana-e-Ajaed*, by Surur.

(2) *Bagho-Bahar*.

(3) *Singhasan-Battisi*.

(b) Sir Syed's School of Urdu Literature:

(1) *Ibnul-waqt*.

(2) *Nairang-e-Khiyal*.

(3) *Khutebat-e-Ahmadiyya*. (Portion: bab 4th.)

(c) Modern Prose:

(1) *Ifadat-e-Mehdi*.

(2) *Hamari-Shæri*.

(3) *Munsurat-e-Kaifi*. Pages 66–98 and 187–289.

(4) *Tauziyyat and Mazhakat*, by Rasheed Ahmad.

VI. ESSAY

VII. DAKHANI LITERATURE

(with special reference to the part played by the Sufis in their development of the language. Besides lectures by the Professor.)

Urdu-ki-Nasvo-Noma men sufia-e-Kiram Ka-Hissa.

VIII. RHETORIC AND PROSODY

(Besides lectures by the Professor.)

(1) *Cheragh-e-Sokhun*.

(G) HISTORY

FINAL EXAMINATION

*Special Subject under Major Subject***1942**

South India in the Time of the Hoysalas.

Or

The French Revolution to the Fall of the Directory.

Or

The Subsidiary System.

1943

The Age of Harshavardhana.

Or

Thirteenth Century Europe.

Or

The Subsidiary System.

1944

The Age of Harshavardhana.

Or

Thirteenth Century Europe.

Or

The Subsidiary System.

(H) ECONOMICS

FINAL EXAMINATION

*Special Subject under Major Subject***1942**

Accountancy.

Or

States in Federal India.

1943

Accountancy.

*Or*Malthus—*Essay on Population*.**1944***One of the following:—*

Accountancy.

Malthus—*Essay on Population* (Ashley's Edition).

Ricardo—(Ashley's Edition).

(I) PHILOSOPHY

(A) METAPHYSICS BRANCH

*Paper III under Major Subject**Metaphysics with Special Reference to Contemporary Philosophy
Prescribed Classic***1941 and 1942****Bergson's *Creative Evolution*.****1943****Bosanquet's *Principles of Individuality and Value*.****1944****Bosanquet's *Principles of Individuality and Value*.**

(B) PSYCHOLOGY BRANCH

*Optional Subjects in respect of Papers VI and VII under
Major Subject***1941-42-43****Industrial Psychology.
Mental Measurements.****1942-43-44****Industrial Psychology.
Mental Measurements.****E. B.Sc. Degree Examination****I. COMPULSORY ENGLISH****Text-books are the same as those prescribed for the B.A.
Degree Examination.****II. SECOND LANGUAGE****(A) KANNADA****Text-books are the same as those prescribed for the B.A.
Degree Examination.****(B) TELUGU****Text-books are the same as those prescribed for the B.A.
Degree Examination.****(C) TAMIL****Text-books are the same as those prescribed for the B.A.
Degree Examination.**

(D) SANSKRIT

Text-books are the same as those prescribed for the B.A. Degree Examination.

(E) URDU

Text-books are the same as those prescribed for the B.A. Degree Examination.

(F) PERSIAN

Text-books are the same as those prescribed for the B.A. Degree Examination.

(G) ARABIC

Text-books are the same as those prescribed for the B.A. Degree Examination.

F. B.Sc. (Hons.) Degree Examination**I. COMPULSORY ENGLISH****PRELIMINARY EXAMINATION**

Text-books are the same as those prescribed for Paper I for the B.A. Degree Examination.

II. SECOND LANGUAGE**PRELIMINARY EXAMINATION**

(A) KANNADA

Text-books are the same as those prescribed for the B.A. Degree Examination.

(B) TELUGU

Text-books are the same as those prescribed for the B.A. Degree Examination.

(C) TAMIL

Text-books are the same as those prescribed for the B.A. Degree Examination.

(D) SANSKRIT

Text-books are the same as those prescribed for the B.A. Degree Examination.

(E) URDU

Text-books are the same as those prescribed for the B.A. Degree Examination.

(F) PERSIAN

Text-books are the same as those prescribed for the B.A. Degree Examination.

(G) ARABIC

Text-books are the same as those prescribed for the B.A. Degree Examination.

G. Master's Degree Examination, 1942

(A) MASTER OF ARTS

I. ENGLISH

Special Period: Seventeenth Century, 3 papers.

Special Author: Keats, 1 paper.

II. KANNADA

Paper I

Kannada Literature: Special Period—The Period of Chikka-devaraja Wodeyar.

III. SANSKRIT

Veda

*Papers I and II**Prescribed for Study*

Siddhanta Kaumudi: Svāra and Vaidika Prakaranas.

Yaska's Nirukta: Adhyayas I and II—Pada I. (Nirnayasagara Press.)

Vedic Reader: Edited by Macdonell. The following eight suktas:

- (i) Usas, IV, 51.
- (ii) Parjanya, V, 83.
- (iii) Asvina, VII, 71.
- (iv) Varuna, VII, 86.
- (v) Mandukas, VII, 103.
- (vi) The Funeral Hymn, X, 14.
- (vii) Gambler, X, 34.
- (viii) Ratri, X, 127.

Aitareya Brahmana. Book VIII.

Recommended for Study

Macdonell: *Vedic Grammar*.

Macdonell: *Vedic Mythology* (*Encyclopædia of Indo-Aryan Research*).

Bloomfield: *Religion of the Vedas*.

Arnold: *Vedic Metre*.

- Max Muller: *History of Ancient Sanskrit Literature*.
 Winternitz: *History of Indian Literature*, Vol. I.
The Cambridge History of India, Vol. I—*Ancient India*.
Svara-Siddhanta Chandrika. (Annamalai University Publication.)
 Keith: *Rigveda Brahmanas*. (Harvard Series.)

ALANKARA

*Papers III and IV**Selected Subjects—Prescribed for Study*

- Dasarupa of Dhananjaya*: Chapter IV.
Dhvanyaloka of Ananda Vardhana: Chapters I and IV.
Vyakti-viveka of Mahimabhata: Chapter I.

Recommended for Study

- S. K. De: *History of Sanskrit Poetics*: Volumes I and II.
 T. A. Richards: *Practical Criticism*.
 Corce: *Aesthetics*.
 P. V. Kane: *History of Alankara Literature*.
 Butcher: *Aristotle's Poetics*.

IV. HISTORY

Paper IV: A Special Period of History

The Indian Mutiny 1857 or Treaty of Versailles.

V. ECONOMICS

Papers III and IV

A Special Subject.

Paper III

Foreign Trade of India.

Paper IV

Federal Finance of India.

VI. MENTAL AND MORAL SCIENCE

Thesis.

(B) M.Sc.

I. MATHEMATICS

Papers III and IV

M.A.

Mathematical Economics.
 Difference Equations.

M.Sc.

Electro-Magnetic Theory.
Hydromechanics.

II. PHYSICS

Papers III and IV

One of the following:

Electromagnetic Waves and their applications.
Spectroscopy.

III. BOTANY

Papers III and IV

Special Morphology of Pteridophytes.
Ecological Anatomy.

IV. ZOOLOGY

Papers III and IV

One of the following:

Fishes

Mammalian Embryology.

V. GEOLOGY

Papers III and IV

Stratigraphy and Palæontology.
Crystallography and Mineralogy.

CHAPTER III

LIST OF CANDIDATES SUCCESSFUL AT THE EXAMINATIONS HELD DURING 1939-40

I. INTERMEDIATE EXAMINATION, 1940

(a) Intermediate Examination in Arts

No.	Class	Names	No.	Class	Names
	I	Ananda Rao, M. V.		III	A
	II	Bharath Raj Singh,			Abdul Ghani, M. H.
	Order	M. E.			Abdul Samad, R.
	of	Sudhama, K. S.	40		Anantha Krishna, K. V.
5	Merit	Sitaramiah, N. K.			Anantha Ramu, B. R.
		Ramachandran, T. N.			Anantha Raman, M. N.
		Mumtaz Begum.			Annamma, T.
		Yamuna, U. D.			Annie, E. V.
		Sita Bai, N.			B
10		Hanuman, B. S.	45		Basappa, H.
		Kuppuswamy Iyengar,			Basava Raju, L.
		G. R.			Bharathi Ramana Char,
		Narayana Rao, G.			M. K.
		Narasimhacharu, K. V.			Bhaskar Jesupriya.
		Marulappa, G.			Brahma Raju, T. P.
15		Veeraraghavachar, S. M.			C
		Padmanabha, M.			Chandramma, T. S.
		Lakshmi, B. N.	50		Chandrasekaraiah, M. C.
		Anusuya, M.			Chinnaiah, O.
		Raghavendra Rao, Y. A.			D
20		Prahlada Rao, N.			Devadan Sadhu, S.
		Kumaraswami, V. T.			Devanath, C. J.
		Narasimhamurthy, K.			Dhanya Kumar, H. P.
		Purnshothama Rao, C. L.			Dhanakumaran, B. N.
		Sriranga Setty, C. H.	55		Dhanyakumariah, S. N.
25		Mahalakshmi, K. N.			Dodda Basappa, C.
		Ranganatha Sastry, B.			Doddaramiah, G. V.
		Gururajachar, G. R.			G
		Radhakrishna, G.			Gangadharappa, R. S.
		Khanum, F. Z.			Gangamma, S.
30		Visweswaraiya, N. S.	60		Girithimmiah, K.
		Nazeer Ahmed, M. L.			Gopal, M. S.
		Lalithamma, M. S.			Gopalan, T. S.
		Anjanappa, S. D.			Gopinath, S. B.
		Gangarudriah, M.			Govindaraja Modalial,
35		Syed Shah Ali, H. M.	65		C. M.
		Suryanarayana Rao,			
		B. P.			
		Varadarajan, G.			

No.	Class	Names	No.	Class	Names
	III	<i>H</i> Hanumantiah, B.		III	Narayana Rao, T. Nemakanthan, N. T. Nemi Raju, R. J.
		<i>I</i> Israel Benjamin.			<i>P</i> Pany, R. K. Parama Sivaiah, M. G. Puttanniah, H. B.
		<i>J</i> Jaya Dev, M. V. Jayamma, V.	110		<i>R</i> Rajasekharaiah, Y. R. Ramachandra, S. Ramachandrarachar, H. Ramachandra Rao, S. Ramappa, K. Ramappa, R. Rama Rao, B. S. Rama Rao, N. Rama Sastry, H. Rama Sastry, T. V. Ramaswamy, M. Rame Gowda, S. H. Ramu, N. Rangajois, C. K. Ranganatha Rao, C. Rukmani, P. S.
70		<i>K</i> Kamala, H. R. Kamala Bai, U. D. Kantirava Swamy, A. C. Kasi Putta Somaradhya. Keshava Murthy, N. G. Keshava Murthy, V. S. Kesav, B. Krishna Murthy, D. R. Krishna Murthy, N. Krishna Swamy, M. V.	115		<i>S</i> Sampathkumaran, K. R. Sampattu Iyengar, R. Sanjeeva Setty, B. N. Sathyanarayana, M. Seshagiri Rao, G. B. Shamanna, N. K. Shankara, H. Shanakara Narayana, A. M. Shankari Bai, I. Shanta, H. T. Sharadamma, S. R. Siddalingappa, B. N. Sreekantiah, S. A. Sreenivasiengar, B. C. Srinivasa Iyengar, A. V. Srinivasan, P. R. Subramaniyan, V. R. Subramanya, N. Subrahmanya Sastry, C. Sundara Murthy, A. C. Surma Bai, S. K. Suseela, N. Susila, C. S. Swami Rao, K. Syed Ameer Ali.
75		<i>L</i> Lakshmi, K. S. Lakshminarayana, H. J. Lakshminarayana, M. Lalitha, K. L. Lingappa, S. M.	120		
80		<i>M</i> Madhava Rao, H. S. Mahaboob Shariff. Mani, D. S. Mari, K. H. Mariappa, K. Masiyappa, V. G. Mir Murthuza Hussain. Mohammed Haneef, A. Muddaiah, K. Muniswamiah, K.	125		
85		<i>N</i> Nagalakshamma, Y. N. Nagaraja, M. S. Nagappa Heggade, M. G. Nagappa, T. R. Nagesha Rao, A. Nanjiah, B. Nanjundiah, S. Narase Gowda, K. P. Narasimha Reddy, P. Narayan, S. A. Narayana Iyengar, M. S. Narayana Murthy, M. K.	130		
90			135		
95			140		
100			145		
105			150		

No.	Class	Names	No.	Class	Names
155	III	<i>T</i> Tara, J. K. Thimmaiah, G. V. Thiruvengadiah, K. N. Trivikrama, B. K.		Nil	<i>K</i> Kannan, V. Kanniah Chetty, B. V. Krishnaswamy, N.
		<i>U</i> Udduriah, B.			<i>L</i> Lakshminarayana, S. T.
160		<i>V</i> Vaidehi, K. V. Vasudeviah, S. Vasudeva Murthy, C. S. Veerappaiah, N. B. Venkatanaranappa, M. S. Venkatanarasiah Setty, T. L.	185		<i>M</i> Mahaboob Jan. Marisankariah, T. R.
165		Venkata Ramana, U. V. Venkatramia, H. S. Venkataramanan, K. Venkata Rao, S. N. Venkata Rama Sastry, T. N.	190		<i>N</i> Nagappa, H. Nanjappa, C. N. Nanjundaiya, D. Nanjundiah, N. Narada, D. Narasimhiah, P. Narayana Rao, S. R.
			195		<i>R</i> Ramanna, H. S. Rama Sastry, V. Ramaswamy Ayyangar, M. S.
170	Nil	<i>A</i> Abdul Basheer, A. M. Abdul Rasool. Aswathiah, T. N.	200		Ranganatha Rao, K. G. Rangaswamiyangar, H. G. Rudrappa, G. Rudrappa, M. S.
		<i>B</i> Bheema Rao, S. R.			<i>S</i> Safeer Ahmed, B.
		<i>C</i> Chokkanna, N.			<i>Savitri, V.</i> Shankara Iyer, H. Shankaranarayana Rao, V. P.
175		<i>D</i> Das Naidu, M. N.	205		Shivalingappa, B. Subbanarasimhaiya. Subbanarasimhiya, G.
		<i>G</i> Gopinath, V. N. Gundu Rao, N. Gururaja Rao, R.			<i>V</i> Vaidyanathan, C. N. Vamana Rao, N. S.
		<i>I</i> Indrasena Raj, M.	210		Vedanthakrishnamachar, S. Y.
180		<i>J</i> Javare Gowda, K. J.			Vishakanta Setty, V.

1. (b) Intermediate Examination in Science

No.	Class	Names	No.	Class	Names
5	I Order of Merit	Narayana Rao, V. <i>Tara, D. K.</i> Satyendra, K. N. Desikachar, P. R. Varadaraj, H. R. Jayaratna Rajaiah, S. B. Ramachandra Chetty, T. S.	45	II Order of Merit	Sethu Rao, M. A. Narayana Prasad, B. R. Srinivasa Murthy, V. N. Anantha Swami Rao, B. S.
10		Venkata Rao, D. Sivanna, G. S. Srinivasa Chakravarthy, L. S.	50		Balavanta Rao, B. Subba Krishniah, A. Raghu Ram, B. N. Veerabhadraiah, H. Venkateswaran, Y. S. Ganeshaiya, S. K.
15		Venkatesa, H. G. Krishna Prasad, K. V. <i>Seetha, H. N.</i> Choudaiah, K.	55		Sridhara Murthy, B. R. Srinivasamurthy, H. K. Suryanarayana Sastry, M. S.
20		Anantha Kini, K. Venkatanarasimhaiya, C. K.	60		Rangadasappa, T. Chandra Shetty, S. P. Syed Abdul Rahmon, K. Krishnama Charlu, T. G. Gopalakrishna Iyengar, T. N.
25		Narasimhaiah, H. Ananthanarayana Rao, K.	65		Vasudeva Murthy, A. Krishna Murthy, M. S. Sri Ranga Raju, H. V. Srinivas, K.
30		Narayana Murthy, M. V. Krishnachar, D. S. Chinnmayanandam, B. R. <i>Sushila Bai, D.</i> Srinivasa Rao, K. N.	70		Seshadri, S. R. <i>Kaveramma, T. L.</i> <i>Padmini, M. C.</i> Veeraraghavan, N. S. <i>Vanaja Mani, T. S.</i>
35		Shankaranarayana, H. S. Krishna Murthy, Y. Subba Rao, H. G. Srinivasan, K.	75		Sankaranarayana, B. P. Natesa Narayana Sastry, K.
40		Mallappa, M. G. Gangadhariah, K. M. Sivalingappa, B. K. Narayana Rao, C. S.	80		Syed Shahabuddin, S. Y. Srikantiah, K. N. Devariah, K. N. Muralidhar, B. S. Gavi Setty, K.
		Krishna Iyengar, V. R. Ramachandran, E. G. Raja Rao, C. S. Narasimha Murthy, D. S.	85		Doreswamy, M. C. Raja Rao, M. Ramanujalu, D. K. Ramakrishna Gupta, S. Narasimha Prasad, T. N. Krishnaswamy, M. V.
		Subrahmanya, N. R. Rudra Moorthi, B. Rudrappa, M. Shivanna, M. R. Ahuja, L. B.	90		Keshavan, R. S. Sathyanarayana, B. V. Venkataramaniah, H. R. Subba Rao, A. Srikantaiya, D. S. Nagabhushana Rao, B. S. Gopala Rao, K.
		<i>Kasturi Bai, A. R.</i> Lakshmana Rao, K. S. Theertha, N. V.			<i>Sarojamma, B. S.</i>

No.	Class	Names	No.	Class	Names
95	II	Gopalaiah, B. Chandramouly, V. Subramanyashiva, S. G. Raja Ram, H. K. Sivarudrappa, B. S. Ananda Rao, T. Venkata Char, P. S. Neelakantappa, S. Basappa, K. Madhava Rao, M. S. Nagabhushana Rao, A. Chinnaswamy, Y. Srinivasa Modaliar, P. S.	140	III	<i>B</i> Balachandra Rao, K. Basavalingaiah, M. C. <i>C</i> Chandrasekhara Iyer, A. S. Chandrasekhara Rao, D. S. Channappa, N. Chinnappa, M. Chowdappa, P. <i>D</i> Dasarathy, B. N. Divakar, L. N. Doddaveeriah, M. C. Doraswamy, K. N. Doraswamy, T.
100		Subbaramiah, S. Shivashankar, G. Rama Rao, B. R. Narasimha Rao, B. S. Subrahmanyam, D. L. Nagaraja Rao, N. <i>Chandramma, N.</i> Gopala Swamy Iyengar, R.	145		<i>E</i> Elizabeth, A. M. <i>G</i> Gangahanumiah, K. Gopala Krishnan, S. R. Gulam Mahamood Khan, Ghori. Gurumurthy, B. S.
105		Padmanabhan, K. N. Govinda Raju, B. S. Sathyanarayana Rao, N. Bhagavan, R. K. Narayana Rao, P. S. Gopala Rao, Y. A. Ramachandra, S. N.	150		<i>H</i> Hanumanthappa, H. <i>J</i> Jagannatha Rao, K.
110		Mahamood Ali Sheriff. Sampathkumaran, B. R. Badarinath Rao, B. K. Sree Ramappa, B. Dwarakanath, V. R. Varadarajan, S. Krishna Murthy, S.	155		<i>K</i> <i>Kamalamma, G.</i> Kasappa, B. Keshavamurthy, B. L. Keshava Moorthy, B. P. Kshetrapalaiah, K. R. Krishnaiyengar, T. Krishnaiah Nadig, H. N. Krishnamurthy, A. S. Krishnamurthy, D. Krishna Murthy, K. R. Krishna Murthy, N. V. Krishnaswamy, J. P. Krishnaswamy, S. Krishna Swamy Rao, M. S.
115		Narasimha Prasad, M. A. Sreenivasa Iyengar, B. S. Mahadevappa, K. H. Sanjeeva Rao, B. Nagaraj, C. N. Sita Rama Rao, M. K. Kesava Murthy, H. Lakshminarasimhaiah, S.	160		
120			165		
125					
130					
135		<i>A</i> Alasingrachar, M. N. Ananta Sastry, K. Aswathanarayana Rao, B. L. Aswathanarayana Rao, D. V.	170		

No.	Class	Names	No.	Class	Names
		<i>L</i>			
	III	Lakshmana Reddy, M. V.	215	III	Rama Rao, K. K.
		Lakshminarasimha			Ramanna, K. G.
		Iyengar, B. R.			Ramaswamy, M. V.
		Lakshminarasimhaswamy,			Ramaswamy Iyengar,
		M. S.			P. N.
175		Lakshminarayana, A. R.	220		Ramoo, K. G.
		Lakshminarayanan, K. N.			Rangamani, V.
		Laxmi Narasimhiah, N.			Ranganath, B. K.
		Leelavathi, M. D.			Ranganatha Rao, N.
		Linganna, M.			
		<i>M</i>			<i>S</i>
180		Madhava Rao, S.	225		Sampath Iyengar, K.
		Madhuravani, R. D.			Samuel John Wesley.
		Mahamood Yakub.			Sankaran, N. L.
		Manchegowda, K.			Sankara Rao, T.
185		Meenakshi, P. S.			Sarangapani, H.
		Mohamed Sirajuddin			Sathyanarayana Rao,
		Ahmed.			L. S.
		Munikrishna, C.	230		Sathyanarayana Iyer, A.
					Satya Narayana Rao,
		<i>N</i>			H. N.
		Nagabhushana, A.			Seetharamiah, M. S.
		Nagaraja Rao, A. N.			Sesh giri Rao, D.
190		Nagendramoorthy, P. R.	235		Sethurama Rao, H. K.
		Narasimhachar, S.			Setlur, S. N.
		Narasima Moorthy, H. R.			Shakuntala, J.
		Narasimha Row, N.			Shakuntala Bai, B. V.
		Narayana Dikshit, D. S.			Shamanna, G. S.
195		Narayana Rao, K. R.	240		Shankaranarayana, K. V.
		Nazira Begum, A. M.			Shankarappa, T. K.
		Nazir Ahmed Pasha			Shankara Royal, P.
		Nisar Ahmed Khan.			Sheshadri Iyengar, K.
		<i>P</i>			Sitaramaiah, B.
		Parthasarathy, K. R.	245		Sosalegowda.
		Prahlada Rao, A. R.			Sreenivasa Vittal, M. V.
		<i>R</i>			Sridharan, C. B.
200		Raghavan, V. R.	250		Srinivasan, C. S.
		Rajagopal, C.			Srinivasan, K.
		Rajanna, T. B.			Srinivasan, P.
		Raja Rao, M. L.			Sripada Rao, U. B.
		Rajasekariah, D. V.			Subbannachar, A. R.
205		Rajasekara Setty, M. R.	255		Subbannachar, D.
		Ramachandrachar, G.			Subramanya, B. R.
		Ramachandra Swamy,			Subramanya Bhatt, U.
		S. M.			Subramanyaraj Urs, M. V.
		Ramadas, K. S.			Sundaram, T. S.
		Rama Das, Y. V.			Suryanarayana, B.
210		Rama Iyer, S.	260		Suryanarayana, N.
		Rama Iyer, G. S.			Suseela Bai, H.
		Ramamurthy, A. V.			Susheelamma, B. K.
		Rama Rao, C. R.			Syed Hussain.
		Rama Rao, K.			
					<i>T</i>
					Thammiah, V. B.
					Thimme Gowda, L.
					Tripurantaka Sastry, H. G.

No.	Class	Names	No.	Class	Names
265	III	V Vasudeva Murthy, L. S. Venkatachar, K. N. Venkatakrishna Sastry, Y. S. <i>Venkatalakshamma, J.</i> Venkatappa, R.	300	Nil	Krishnaswamy, S. R. Kuppanna, S. C.
270		Venkata Rao, B. Venkatarama Rao, G. Venkat Ram, R. C. Venkata Subba Pandith, Y. L.	305		M Madappa, M. N. Marappa, B. Mariyappa, M. P. Mohiyadden Hussain M. Munisamiah, B.
275		Venkoba Rao, K. Vijayaraghavachar, P. Viswanathiah, G.	310		N Nagappa, H. V. Nagaraja, N. Nagaraja, J. V. Nagaraja Iyer, C. K. Nagarajan, V. B. Nagaraja Rao, K. R. Nagaraja Rao, N. S. Nagaraja Rao, H. Nanjaiiah, D. R. Nanjundayya, H. V. Nanjundiah, K. Nanjundiah, S. Narasimhiah, S. R. Narasinga Rao, H. Narayana, S. K. Narayana Murthi, A. N. Narayana Rao, K.
280	Nil	A Abdul Mujeeb, T. Anandam, T. R. Anantharyan, M. A. <i>Anasuya, M. G.</i> Aziz Ahmed Khan.	315		P Padmanabha Rao, C. V. Pattabhi Rama Iyengar, D. Premachandra, N.
285		B Bhashyam, C.	320		R Rajan, T. D. Rama Chandra, S. Ramachandra Rao, M. S. <i>Ramakka.</i> Ramalingam, J. T. Ramannachar, P. S. Ramaraja Iyengar, S. V. Ramaswamy, G. Ramu, M. Ranganathan, R. Revanna, C. M.
		C Chandrasekhara, M. R.	325		S Sachidananda Bhatta, J. R. Seetharaman, K.
		D Doraswamy, N. Doraswamy, V. K. Doraiswamy, K.	330		
290		E Edwin, P. S.	335		
		G Ganapathy Iyer, K. S. Garudachar, B. R. Gopalakrishnamachar, S. Gopala Rao, M. C. Govinda Rao, B. S. Gurudutt, N. Gururaja Rao, G. Guru Rao, L. Gurusiddappa, Y. S.			
295		K Kambadurappa, T. C. Kari Gowda, A. C. Keshava Murthy, A. L. Krishna Rao, G. S.			

No.	Class	Names	No.	Class	Names
340	Nil	Seetha Rama Rao, M. N.	360	Nil	Sundara Krishna, T. G.
		Seshagiri Rao, D.			Suryanarayana, V.
		Siddalingappa, M.			Suryanarayana Raju, B. T.
		Siddananjiah, G.			Subramanya Raj Urs, M.
		Singlachar, M. A.			Swamy, S. R.
345		Sitharama Rao, M. N.	365	Nil	Syed Abdul Hakeem.
		Sivaramaiya, B.			U
		Sreenivasan, K. R.			Umapathi Naidu, R.
		Srikantiah, B.			V
		Srinidhi, B. R.			Venkata Ramaiah, K.
350		Srinivasa, C. N.			Venkatesa Iyengar, K. S.
		Srinivasa Iyengar, K. R.			Venkatappa Gowda, T. S.
		Srinivasa Iyengar, K. V.			Vedavyasachar, M.
		Srinivasan, M. D.			Z
		Subba Rao, H.			Zafar Ali Khan,
355		Subba Rao, P. A.			
		Subrahmanyam, N. K.			
		Subramanyam, R.			

2. B.A. (New Rules), 1940

Part I—Compulsory English

Part II—Second Language

Part III—Optional Subjects

B.—Botany
E.—Economics
Eng.—English
H.—History
K.—Kannada
M.—Mathematics
Per.—Persian
Pol.—Politics

Ph.—Philosophy
Phy.—Physics
S.—Sanskrit.
Soc.—Sociology
T.—Tamil
Te.—Telugu
U.—Urdu
Z.—Zoology

Names	Optional Subjects	Second Language	Class		
			Part I	Part II	Part III
Abdul Khadir, R.	Eng. Per. Ph.	U	3	1	3
Abdul Sattar Khan	E. Soc. Ph.	U	3	3	3
Abdul Shukoor, Holenarsipur Māgadum Sahib	E. Pol. Ph.	U	3	3	2
Albert Mano Raju, Thomas	H. E. Eng.	K	3	3	3
5 Anantha Rama Iya, Rama Iya	E. Soc. Ph.	S	3	1	2
Anantharamiah, Kittane Venkata- naranappa	H. E. Eng.	K	2	1	3
Annayappa Setru, Harubande	H. E. Soc.	K	3	3	3
Balasubramanian, Ramanathan	Eng. Phy. M.	S	3	3	3
Basappa, Gangappa	E. Soc. Ph.	K	3	3	3
10 Bore Gowda, Aghalaya Kodi Gowda	H. E. Pol.	K	3	2	2
Channabasappa, Nagarle Ellappa	H. E. Pol.	K	3	3	3
Channaraj Urs, Nijaganahalli Siddaraj Urs	H. E. Pol.	K	3	2	3
Dasarathan, Krishnaswamy	Eng. Pol. Ph.	T	3	3	3
Devaraj Urs, Bedarahalli, C.	E. Pol. Ph.	K	3	3	3
15 Easwaran, Chicknayakanahalli Thammaiah	E. Soc. Ph.	K	3	3	3
Gabriel, E. S.	H. E. Soc.	K	3	3	2
Gangiah, Heggunda	E. Soc. Ph.	K	2	3	3
Giddappa, Appajappa	Eng. Pol. Ph.	K	3	3	3
Gopalakrishna, Sreemushnam Ramachar	H. E. Eng.	S	3	3	3
20 Gopal Rao, Gudibanda Srinivasa Rao	Eng. Phy. M.	K	3	3	3
Govinda Raju, Chidambarappa	E. Soc. Ph.	K	3	3	3
Gurairya, Tumkur Gurumallappa	E. Pol. Ph.	S	3	2	3
Halappa, Arehalli	E. Soc. Ph.	K	3	3	3
Hanumanthachar, Airy Ramachar	H. E. Pol.	S	3	3	3
25 Hanumiah, Hanumanthappa	E. Soc. Ph.	K	3	2	3
Hutche Gowda, Mayi Gowda	H. Pol. K.	K	3	2	3
Jagannath, Avathi Sreecanta Sharma	H. E. Eng.	K	3	3	3
Jayadevappa, Bharamannaikanadurga Nadiga	E. Pol. Ph.	K	3	3	3

	Names	Optional Subjects	Second Language	Class		
				Part I	Part II	Part III
	<i>Jayalakshammanni, Mallaraj Urs</i> ..	H. E. Soc.	K	3	3	3
30	Kale Gowda, Hulikal Puttaswami					
	Gowda ..	E. Soc. Ph.	K	3	3	3
	Kesavan, Sangli Murugesom ..	E. Soc. Ph.	T	3	2	3
	Krishna Moorthy, Bettadapur					
	Ramaswamy ..	E. Soc. Ph.	K	3	3	3
	Krishna Murthy, Haribar Srinivasa Rao ..	H. E. Pol.	K	3	2	2
	Krishna Murthy, Mirle Shama Rao ..	H. E. Pol.	K	3	3	3
35	Krishnaswamy, Saklespur Hiriannaiya	E. Soc. Ph.	K	3	3	3
	Lakshmana Rao, Madanahalli	H. E. Pol.	K	3	2	3
	Lakshminarayana Rao, Bagur					
	Venkataramaiah ..	E. Soc. Ph.	K	3	3	3
	Linge Gowda, Lakshmana Gowda	E. Soc. Ph.	K	3	2	3
	Lingiah, Athahalli Lingay Gowda ..	H. Pol. K.	K	3	3	3
40	Madhava Rao, Sethu Rao ..	H. E. Pol.	S	3	3	2
	Mariyappa, Aijenahalli Balegowda	E. Pol. Ph.	K	3	1	2
	Mohamad Zakaria, Shaik ..	H. E. Pol.	U	3	2	3
	Nagappa, Sindhaghatta ..	E. Pol. Ph.	K	3	1	2
	Nagappa, Singriah ..	E. Soc. Ph.	K	3	3	3
45	Nagaraja, Magery Shama Rao ..	H. E. Eng.	S	3	3	3
	Nagaraja, Dhongdi Krishna Rao ..	E. Pol. Ph.	K	3	3	2
	Nagaraja Rao, Kolar ..	E. Pol. Ph.	K	3	3	3
	Nanjappa, Sivarajapur ..	H. E. Eng.	K	3	3	3
	Nanjundappa, Gowder ..	E. Pol. Ph.	K	2	3	3
50	Narasimhamurthy, Sripathi ..	E. Pol. Ph.	S	3	1	2
	Narasimha Murthy, Krishna Murthy	E. Pol. Ph.	S	3	3	3
	Narasimha Murthy, Kalenahalli					
	Suryanarayana Sastry ..	H. Pol. S.	S	3	3	3
	Narasimhamurthy, Heeruguppe					
	Shamiah ..	E. Soc. Ph.	K	3	3	3
	Narayana Rao, Lakkur Srinivasiah ..	H. E. Pol.	K	3	3	3
55	Neele Gowda, B. Y. ..	E. Pol. Ph.	K	3	3	3
	Nirmaladhary, Mavalli ..	E. Soc. Ph.	S	3	3	3
	Parthasarathy, Narayanachar,					
	Kothapalle ..	Eng. Phy. M.	Te	3	1	3
	Prabhachandra, Sravanabelgula					
	Jwalaniah ..	E. Soc. Ph.	K	3	2	3
	Raghunathamurthy, Belur Krishna-					
	murthy ..	H. E. Pol.	K	3	3	2
60	Rahmuthullakhan ..	Eng. Per. Ph.	U	3	2	3
	Rahmathulla Khan, Yusuff Khan ..	E. Soc. Ph.	K	2	3	3
	Ramachandra Rao, Aroodi ..	H. E. Pol.	K	3	3	3
	Ramachandra Rao, Hirisave					
	Narayana Rao ..	H. E. Soc.	K	3	3	3
	Ramachandra Rao, Chamarajanagar					
	Krishnappa ..	Eng. Pol. Ph.	K	3	3	3
65	Ramachandra Rao, Vasudeva Rao ..	Eng. Z. B.	K	3	3	3
	Ramakanthan, Mysore ..	Eng. Phy. M.	K	3	3	2
	Ramakrishna Rao, Belvadi Anantha-					
	narayana Rao ..	E. Pol. Ph.	K	3	3	3

Names	Optional Subjects	Second Language	Class		
			Part I	Part II	Part III
Ramanna, Tarikere Beerappa ..	E. Soc. Ph.	K	2	3	3
Ramapriyan, Nonvinkere ..	H. E. Pol.	S	3	3	3
70 Ramaswamy, Kattemalalavadi ..					
Venkatarama Iyer ..	E. Pol. Ph.	K	3	3	3
Ranganatha Rao, Kadur Rama Rao ..	H. E. Pol.	K	3	3	2
Rego, Gladwyne Maurice ..	E. Pol. Ph.	K	3	3	3
Rudrappa, Bhoganna ..	Eng. Pol. Ph.	K	3	3	2
Sanjeeva Rao, Talya Subba Rao ..	Eng. Phy. M.	S	3	1	3
75 Seethamma, A. ..	H. E. Soc.	S	3	2	3
Seshagiri Rao, K. R. ..	Eng. K. Ph.	K	3	3	3
Shadrach, Devadasappa ..	E. Pol. Ph.	K	3	3	3
Shama Rao, Chikballapur ..	E. Pol. Ph.	K	2	2	3
Shamasundaram, Tumkur Dharma-lingam ..	E. Soc. Ph.	K	3	3	3
80 Shankar Rao Bapat ..	H. E. Pol.	K	2	2	2
Shankara Sastry, Venkatachala Sastry ..	H. E. Soc.	K	3	3	3
Sitarama Rao, Desirazu ..	Eng. Phy. M.	K	3	3	3
Siviah, Yelwal Nanje Gowda ..	Pol. Soc. Ph.	K	3	3	3
Sreedharamurthy, Chenjeri Sreenivasa Rao ..	E. Pol. Ph.	K	3	3	3
85 Sreekantiah, Peresandra Bheema Jois ..	E. Pol. Ph.	K	3	3	3
Sreenivasamurthy, Raja Iyengar ..	H. E. Pol.	K	3	3	2
Srinivasamurthy, Rudrapatna ..					
Yagnanarayana Dixit ..	H. E. Pol.	K	2	3	3
Sripadamurthy, Mysore Kesava Sastry ..	Eng. S. Ph.	S	3	1	3
Subba Rao, Changappa ..	H. E. Pol.	K	3	3	3
90 Subramanyam, Gundlupet Ranganna ..	H. E. Eng.	S	3	3	3
Subramanyaswamy, Kankanahalli ..					
Subba Raya ..	Eng. Phy. M.	S	3	1	3
Sunder Raj, Amritachary ..	E. Pol. Ph.	K	3	3	3
Suryanarayana Setty, Kashi ..	H. E. Pol.	K	3	3	2
Suseela, Nandagudi Subba Rao ..	H. E. Soc.	S	3	3	3
95 Thangamma, Mandyam Dhaiti ..	H. E. Soc.	K	3	3	3
Thimmaraya Setty, Hoskote Muni-venkatappa ..	E. Pol. Ph.	K	3	3	3
Vasudeva Rao, Mallesappa ..	E. Pol. Ph.	K	3	2	3
Vedavalli, M. A. ..	H. E. Soc.	S	3	3	2
Venkatanarayana, Kithuru Srikantiah ..	H. E. Eng.	K	3	3	3
100 Venkataramiah, Kadanur ..	Eng. Phy. M.	K	3	3	3
Venkataraaya, Nanjangud ..	H. E. Pol.	K	3	3	3
Venkatarayappa, Chikballapur ..					
Venkatapathappa ..	E. Soc. Ph.	K	3	3	3
Venkateseshiah, Srinivasamurthy ..	E. Pol. Ph.	K	3	3	3
Visweswariah, Sindhuvalipura ..					
Gundiah ..	H. E. Soc.	K	3	3	3

B.A. (Old Rules)

Names	Optional Subjects	Second Language	Class		
			Part I	Part II	Part III
Annaiah, N. C.	E. Comp. Pol.				
	Ph.	K	3	3	3
Madhaya Rao, Madivalada ..	Phy. M..	K	3	3	3
Ramasastry, Shimoga ..	E. Comp. Pol.				
	Ph.	S	3	3	3
Ranganatha Rao, Doddaballapur ..	H. E. Pol.	K	3	3	3
5 Rangiengar, Seringapatam Ramaswamiengar	Phy. C.	K	3	3	3
Shankaralingappa, Settikere ..	E. Pol. Ph.	K	3	3	3
Srinivasamurthi, Gundappa ..	Phy. C.	K	3	3	3

3. B.Sc. (New Rules), 1940

Part I—Compulsory English

Part II—Second Language

Part III—Optional Subjects

B.—Botany	Per.—Persian
C.—Chemistry	P.—Physics
E.—Economics	S.—Sanskrit
G.—Geology	Soc.—Sociology
K.—Kannada	Ta.—Tamil
M.—Mathematics	Te.—Telugu
M.St.—Mathematical Statistics	U.—Urdu
M.E.—Mathematical Economics	*Z.—Zoology

Names	Optional Subjects	Second Language	Class		
			Part I	Part II	Part III
Abdulla Khan, Chickmagalur Khizer Khan	C. Z. B.	U	3	2	2
Ambujamma, R.	P. C. M.	S	3	3	3
Anahda Devi, Cheyyuri Krishnaswami	C. Z. B.	Te	3	1	3
Anthony Cruz, Arulappan	P. M. G.	Ta	3	2	3
5 Aswathanarayana, Rattehalli Shamanna	P. C. M.	S	3	3	1
Augustine David	C. Z. B.	K	3	2	2
Balakrishnan, Ambat	C. Z. B.	S	3	3	3
Balaraj, Doraichetty Joseph	P. C. M.	K	3	3	1
Basappa, Marasu	P. C. M.	K	3	3	3
10 Bhasker, Haladipur Raghavendra	C. Z. B.	K	3	3	3
Bomme Gowda, Chenne Gowda	P. C. M.	K	3	3	3
Cheluvaiah, Haranahalli Anantha Subba Rao	P. C. M.	K	3	3	2
Cheluvaraman, Bangalore Krishna-swamy	C. Z. B.	K	3	3	3
Devendra Nath, Hosali	P. C. M.	U	3	2	2
15 Florence, Premadas	C. Z. B.	K	3	3	3
Gangadhara Murthy, H. Chahna-basaviah	P. C. M.	K	3	3	3
Gopalakrishna Iyengar, Kalkunte Narasimha Iyengar	E. M.St. M.E. & M.	S	3	3	3
Gopal Rao, Kumsi	P. C. M.	K	3	3	2
Govinda Rao, Arakali Puttaiah	P. C. M.	K	3	3	3
20 Gundppa, Kalale Nanjundiah	E. M.St. & M.E. Soc.	S	3	3	3
Gundu Sharma, Mukanahallipatna					
Rama Rao	P. C. M.	K	3	3	3
Gurumurthy, Saraff	P. C. M.	S	3	3	1
Hanumantha Reddy, Balakayi	P. C. M.	K	3	3	3
Hirannia, Herur	C. Z. B.	S	3	3	3
25 Honnaiya, Closepet	P. C. M.	K	3	3	3

Names	Optional Subjects	Second Language	Class		
			Part I	Part II	Part III
Kalinga Krishna, Nannival Rama Bhatta	P. C. M.	K	3	3	3
Kamala Bai, Savkur	P. C. M.	K	3	1	2
Kesavachar, Anoor Krishnamachar	P. C. M.	K	2	3	2
Kesava Murthy, Arakere	P. C. M.	K	3	3	2
20 Kesahva Rao, Mysore Krishnamurthy Rao	P. C. M.	K	3	1	3
Krishna, Mullur Gurumurthappa	P. C. M.	K	3	2	2
Krishnamurthy, Vasthare Seshappa	C. Z. B.	S	3	3	3
Krishnamurthy, Turvekere Ramaswami Iyer	P. C. M.	K	3	3	3
Krishnaswamy, Mandayam Adhyapaka	P. C. M.	K	3	3	3
35 Krishnaswamy, Narasimhiah	E. M.St. & M.E. M.	K	3	2	3
Krishna Swamy Rao, Hanasoge Ranga Rao	P. C. M.	S	3	3	2
Lakshman Gowda, Urvinkhan Kalase Gowda	C. G. B.	K	3	3	2
Lakshmikantha Setty, Nallapeta Sambaiiah Setty	P. C. M.	K	3	2	1
Lakshminarasimha Iyengar, Haravu Ramaswamy	P. C. M.	S	3	3	1
40 Lakshminarayanaiah, Nallanna	P. C. M.	K	3	3	1
Lakshmiopathy, Vyakarana	C. Z. B.	K	3	3	3
Lewis, Yohanappa	P. C. M.	K	3	1	1
Lingappa, Haniyamballi	P. C. M.	K	3	3	2
Madanagopalan, Madras	P. C. M.	K	3	3	2
45 Madhava Murthy, Mudgal Narasimha Murthyachar	P. C. M.	K	3	3	2
Manuel Prabhakar Thomas	C. Z. B.	K	3	2	3
Mohanamba, Pormovilla Lakshmana Murthi	C. Z. B.	K	3	3	2
Munzir Ahmed Meccai	C. Z. B.	U	3	3	3
Nabhi Rajiah, Kalidevapura Brahma Suriah	P. C. M.	K	3	3	3
50 Nagarajaiah, Rampur Anantharajaiah Nagesa Rao, Moda	C. Z. B.	K	3	3	3
Nanjunda Sastry, Nelamangala	E. M.St. & M.E. M.	Te	3	1	2
Narasimha Murthy, Mysore Rama Rao	P. C. M.	K	3	3	3
Narayana Iyengar, Kadaba Yajaman	P. C. M.	K	3	3	3
55* Narayana Setty, Yarasi Narasimha Setty	C. G. B.	S	3	3	3
Phalakshiah, Gurikar Mallikarjuniah	P. C. M.	K	3	3	3
Parameswarappa, Kudineerakatte	P. C. M.	K	3	3	3
Tigalappa	P. C. M.	K	3	3	3
Parvathamma, Amruthur	C. Z. B.	S	3	2	3
Paul Dore Raju, Paul Samuel	C. G. B.	S	3	3	3

* Eligible for the Pass Degree.

	Names	Optional Subjects	Second Language	Class		
				Part I	Part II	Part III
60	<i>Radha Bai, Kandlur</i> ..	C. Z. B.	K	3	3	3
	<i>Radhakantha, Tirumalai Shamachar</i> ..	P. C. M.	S	3	1	2
	<i>Radhakrishnan, Jagadalay Neelacanta Rao</i> ..	P. C. M.	Ta	3	1	3
	<i>Raghavendra Rao, Devanahalli Venkanna</i> ..	P. C. M.	K	3	3	3
	<i>Raghavendra Rao, Harihar Venkoba Rao</i> ..	P. C. M.	S	3	2	3
65	<i>Raja Rao, Koratagere Subba Rao</i> ..	P. C. M.	K	3	3	2
	<i>Ramachandra Rao, Nayanahalli Venkataramaniah</i> ..	P. C. M.	K	3	2	3
	<i>Ramachandra Shastri, Pulvindalam Laxminarayan Shastri</i> ..	P. C. M.	S	3	2	2
	<i>Rama Moorthy, Santebennur Bhimasena Rao</i> ..	P. C. M.	K	3	3	1
	<i>Rama Rao, Kodigenahalli Narasingappa</i> ..	P. C. M.	S	3	3	3
70	<i>Rama Rao, Kumbale</i> ..	C. Z. B.	K	3	3	2
	<i>Ramaswami Iyengar, Bangalore</i> ..	P. C. M.	S	3	3	3
	<i>Ramaswamy, Mudlapur</i> ..	P. C. M.	S	3	3	3
	<i>Ramaswamy, Dommasandra Munisetty</i> ..	G. Z. B.	K	3	3	3
	<i>Ranganathan, Karadi Venkatanarasimha Setty</i> ..	P. C. M.	K	3	3	2
75	<i>Saroja, Narayanaswamy Naidu</i> ..	C. Z. B.	K	3	3	2
	<i>Saroja Bai, S.</i> ..	C. Z. B.	K	3	3	3
	<i>Satyanarayana Rao, Aragola</i> ..	E. M.St. & M.E. M.	S	3	3	2
	<i>Seetaramu, Chandrasekharadeekshit</i> ..	P. C. M.	S	3	3	3
	<i>Seetharaman, P. V.</i> ..	P. C. M.	Ta	3	3	2
80	<i>Seshadri, Kakkadasam Sreenivasa Iyengar</i> ..	P. C. M.	K	3	3	2
	<i>Sham Singh, Mohan Singh</i> ..	P. C. M.	K	3	3	2
	<i>Shankara Gowda, Keelara Veerappa</i> ..	P. C. M.	K	3	2	3
	<i>Shankaranarayana Rao, Konanur Rama Rao</i> ..	C. G. B.	S	2	3	3
	<i>Sharadamma, Samuel</i> ..	C. Z. B.	K	3	3	2
85	<i>Singlachar, Mandayam Tondanur</i> ..	E. M.St. & M.E. M.	S	3	3	3
	<i>Sreekanthaiya, Kumbale</i> ..	P. C. M.	S	3	3	2
	<i>Sreenivasa Moorthy, Kyatasandra Venkata Rao</i> ..	P. C. M.	S	3	3	3
	<i>Srinivasa Murthy, Rudrapatna Krishnappa</i> ..	P. C. M.	S	3	3	3
	<i>Sreenivasan, Danayakanpur Venkataramiah</i> ..	C. Z. B.	K	3	3	3
90	<i>Sreenivasiengar, Holur Krishna-samiengar</i> ..	C. Z. B.	K	3	3	3
	<i>Srikantaiya, Mandya</i> ..	C. Z. B.	K	3	3	3
	<i>Srikanta Aiyar, Amruthur Hasige</i> ..	C. Z. B.	K	3	2	2

Names	Optional Subjects	Second Language	Class		
			Part I	Part II	Part III
Srinivasa Iyengar, Narasimha Iyengar	P. C. M.	K	3	3	3
Srinivasa Rao, Ghat Rama Rao ..	P. C. M.	S	3	3	3
95 Srinivasiengar, Bangalore					
Rangaswamiengar	P. C. M.	K	3	3	3
Subba Rao, Handanahall					
Channakeshavaiah	P. C. M.	S	3	3	3
Subba Rao, B. N.	C. Z. B.	K	3	3	3
Subba Rao, Bangalore Nagappa ..	C. Z. B.	K	3	3	3
Subbarayappa, Siddigari Venkata-samappa	P. C. M.	S	3	2	3
100 Subhan Singh, Charles William ..	C. Z. B.	K	3	3	3
Subramhanya, Mugur Nagappa ..	E. M.St. & M.E. M.	S	3	2	3
Sundara Moorthy, Chokkalingam ..	C. Z. B.	Ta	3	2	3
Suryanarayana Rao, Santhebachalli ..	P. C. M.	K	3	3	3
Swethadri Iyengar, Hemmige Biligiri					
Rangachar	C. G. B.	K	3	3	3
105 Syed Basheer Ahmed	P. C. M.	K	3	3	1
Veeranagappa, Doddiah	P. C. M.	K	3	3	2
Veeraraghavan, Ramanuja Iyengar ..	C. Z. B.	K	3	3	3
Venkatachala Murthy, Hanumanthappa	P. C. M.	K	3	3	2
Venkataramaniah, Rudrapatna Naranappa	E. M.St. & M.E. M.	K	3	3	3
110 Venkata Rao, Adde Nandikur ..	P. C. M.	S	3	3	2
Venkoba Rao, Kakol Hanumantha Rao	P. C. M.	S	3	3	3
Venkoba Rao, Konugovi Narayana Rao	E. M. St. & M.E. M.	K	3	3	3
Venugopalachar, Prativadi Bhayankaram Narasimhachar	P. C. M.	K	3	3	1
Viswanathan, Vijalapur Nagappa ..	P. C. M.	S	3	3	3

4. B.A. (Honours), 1940

Ec.—Economics
Eng.—English
H.—History
K.—Kannada

M.—Mathematics
Ph.—Philosophy
S.—Sanskrit

	Names	Subject	Class
	Abdulla Shariff, Kareem	Ph	2
	Anantharangachar, Narasipur Sreenivasarangachar	S	3
	Basavappa, Jajur Gaviappa	Ec	3
	Devaraj Urs, Haneyambally Devaraj Urs	Ph	
5	Deverappa, Hakkekatte	K	1
	Kameswara Sarma, Mukkamala	M	3
	Kannamma, Kalale	Ec	2
	Krishnamurthy, Turvekere Gundappa	Ph	2
	Lalitha, Tirumalge Nanjappa	Eng	3
10	Lingappa, Basaviah Makodu	M	3
	Markendeya Sarma, Chivukula	M	1
	Muddanna, Munisamaiya	Ec	3
	Nanjundaiya, Bagur Narayana Rao	S	2
	Nanjundaiya, Hole Narsipur	Ec	1
15	Nanjundiah, Hanasoge Srikantiah	S	3
	Narasimha Iyengar, Bangalore Sreenivasaiengar	H	2
	Narasimhamurthy, Krishnamurthy Rao	Eng	1
	Narayana Rao, Palahalli Seetha Ramiah	M	2
	Narayanawamy, Malvalli Subramanyam	H	1
20	Parameswariah, Mylariah	Ec	3
	Ramakrishna Rao, Kasaravally	Ph	1
	Raman, Kattigenahalli	Ec	3
	Ranganatha Rao, Bapat	Ec	3
	Seethalakshmi, Venkatasubbiah	Ec	2
25	Shama Rao, Tallak Subbanna	K	1
	Subba Bhatta, Sessa Bhatta	M	2
	Subba Rao, Kudli	K	1
	Subramanya Sastry, Narsipur Srikanta Sastry	M	2
	Sreenivasachar, Saragur Madabhushi	Ph	2
30	Srinivasachar, Srinivasagopalachar	H	2
	Sundar Rajan, Krishnaswami	Ec	2
	Surendranath, Kalenahalli Bommiah	Ec	2
	Venkoba Rao, Madakasira	H	2

5. B.Sc. (Honours), 1940

B.—Botany
C.—Chemistry
G.—Geology

M.—Mathematics
P.—Physics
Z.—Zoology

	Names	Subject	Class
	Aswathanagaraj, Chennagiri	B	2
	Chikkannaiah, Pathrea Siddaveerappa	B	2
	Gopinath, Doddaballapur Mahabala Rao	B	2
	Gururajachar, Mulbagal Yadhunathachar	C	2
5	Nagaraja, Nagalapur Scshasastry	P	1
	Narasimhamurthy, Ambudi Shamanna	C	2
	Narayana Rao, Amble Hiriyannaiya	P	2
	Nayana Rao, Bachahalli Venkatesachar	P	1
	Prahlad, Bangalore Rangaswamiengar	P	2
10	Ramachandran, Kattamalalvadi Ramakrishna Iyer	B	1
	Ramaiah, Krishnappa	B	2
	Ramappa, Gollara	P	2
	Rama Rao, Yadatore Nanjundiah	G	2
	Rama Rao, Krishna Rao	M	1
15	Rangaswamy, Nangapuram	C	1
	Sathyanarayanan, N. S.	M	1
	Shama Shastri, Kotagal Nanjunda Sastri	C	1
	Sivaramaia, Seringapatam	P	2
	Sreenivasamurthy, Yeddalahalli	P	3
20	Srinivasa Murthy, Surabhi	M	1
	Srirangarajan, Mandayam Anandampillai	P	1
	Sundararajan, L. S.	P	1
	Thippeswamy, Gothiphanadha	C	3
	Vajramuni, Cullukote Gurusurthappa	M	3
25	Vasudeva Murthy, Bheemasena Rao	G	2
	Venkatachala, Sindhaghatta Venkataramiah	C	2
	Venkatachalam, Erramilli	M	1

6. M.A., 1940

E.—Economics
K.—Kannada
H.—History

S.—Sanskrit
Per.—Persian
Ph.—Philosophy

	Names	Subject	Class
	Gurusiddappa, Tumkur Kambadure Setty	Ph	2
	Hanumantha Rao, Manavarte	K	2
	Hutcha Rao, Sirsi	H	2
	Krishnamurti Rao, Holehonnur Srinivasa Rao	Ph	1
5	Krishnaswamy, Kadur Shamanna	E	1
	<i>Lakshamma, Mysore Rama Rao</i>	H	1
	Lakshminarasimhan, Seshadri Iyengar	E	1
	Lakshminarayana Rao, Arakali Suryanarayana Rao	E	2
	Muddalinganna, Veerappa	Ph	1
10	Padmarajiah, Yelekyathanahalli Jinadathiah	Ph	1
	<i>Paryathamma, Hassan Manjappa</i>	E	2
	Rajagopalachar, Laudapuram Varadachar	Ph	1
	Ramakrishna Reddy, Gowd	E	2
	<i>Seethamma, Mysore Narasimhachar</i>	Ph	2
15	Shankaranarayana Rao, Nanjangud Chandrasekhariah	Ph	1
	Sita Ramiah, Ganjam	S	2

7. M.Sc., 1940

B.—Botany
C.—Chemistry
G.—Geology

M.—Mathematics
P.—Physics
Z.—Zoology

	Names	Subject	Class
	Basheer Ahmed Khan, Kunigal	B	2
	Bhima Rao, Coimbatore Narayana	C	2
	Gopala Rao, Periapatam	P	1
	Gundu Rao, Chitaldrug Srinivasa Rao	P	2
5	Krishna Iyengar, Nerlige Srinivasa Iyengar	P	2
	Krishna Rao, Desirazu	M	1
	Krishnaswamy, Mandayam Nayaka	M	1
	Lakshminarayana Rao, Mokshagundam V.	C	2
	Narayana Pai, N.	P	1
10	Parthasarathy, Mangalavarpet Hutchappa	Z	2
	Ramachandra, Udugani Bhima Rao	M	2
	Ramachandran, T. S.	M	2
	Ramachandra Rao, Tumkur Nanjappa	B	2
	Ramanna, Gorur Rayasa	P	1
15	Sampathkumaran, Mandayam Anandampillai	B	1
	Satyanarayana, Hulisandra Narasimhaiah	B	1
	Seshappa, Gudemaranahalli	Z	1
	Sivarama Rao, Gummaraju Ramappa	P	2
	Srinivasa Murthy, Kanagal Hanumantha Rao	P	2
20	Subramanyam, Krishna Iyer	B	1

8. B.T., 1940

	Names				Class
	Ammunny Menon, M. A.	..	..	..	3
	Bharatha Ayyar, Perinkulam Rama Ayyar	..	..	..	3
	Chokkalingam Pillai, C. M.	..	..	..	2
	Chokkanna, Desikachar	..	..	..	3
5	Dinanathmujou	..	..	..	3
	Gopala Marar, T.	..	..	..	3
	Henry, Florence	..	..	..	3
	Kausalya Bai, Kangovi Narayana Rao	..	..	..	3
	Kerala Varma, T.	..	..	..	2
10	Krishnamurthy, B.	..	..	..	3
	Krishnamurthy, B. V.	..	..	..	3
	Lakshmana Iyer, Sessa Iyer	..	..	..	3
	Lakshman Rao, Maniganahalli Suryanaranappa	..	..	..	..
	Mahadevaiya, Thammadihalli Matada	..	..	..	3
15	Mir Murtuza Hussain	..	..	..	3
	Nanjundiah, Gubbi Nanjappa	..	..	..	3
	Narayana, Saligrama Gangadhara Sastry	..	..	..	3
	Natarajan, Sundaram Iyer	..	..	..	2
	Prakash Dhar	..	..	..	3
20	Punita, Julius Bhasker	..	..	..	3
	Raju, Krishna Rau	..	..	..	3
	Ramankutty Menon, Marayil	..	..	..	3
	Ramaswamy, M. Nanjundiah	..	..	..	3
	Raphael, Tharayil Raphael	..	..	..	3
25	Sampath Iyengar, Alayavalli Raghunathachar	..	..	..	3
	Seetha Bai, Huttungudi	..	..	..	3
	Seethamma, Shimoga	..	..	..	3
	Sreenivasa Rao, Pingle Venkoba Rao	..	..	..	3
	Srinivasa Iyengar, M. Agi	..	..	..	2
30	Srinivasa Murthy, Mysore Rama Rao	..	..	..	3
	Subrahmanya Ayyar, Venkitarama Iyer	..	..	..	2
	Thangamma, Prativadi Bhayankaram Narasimhachar	..	..	..	3
	Thomas, Arakkal Enosh	..	..	..	3
	Vaidyanatha Ayyar, N. K.	..	..	..	3
35	Venkateswara Rao, Kotamraju	..	..	..	2
	Venugopala Charlu, Rathnagiri	..	..	..	2

9. B.E., 1940

C.—Civil

M.—Mechanical

E.—Electrical

	Names	Branch	Class
	Anantha, Nuggehalli	C	2
	Dwarakanath, Srinivasa Kesav	C	2
	Gopalakrishna Iyengar, Krishnagiri Thoopil	M	2
	Gopinathacharya, Gowdagere	E	2
5	Gundu Rao, Kuduvali Visvesvaraiya	M	2
	Krishna Rao, Rattehalli Vittala Rao	C	2
	Krishnaswamy, Bangalore	E	2
	Krishnaswamy Rao, Gopala Rao	M	2
	Mukunda Rao, Bagepalli	E	2
10	Muniswamy, Kandaswamy	C	2
	Nandibasappa, Ballekatte Mallappa	C	2
	Nanjappa, Devappa	C	2
	Narasimhan, Cadambi Srinivasachar	E	2
	Narasimha Iyengar, Cadambi	C	2
15	Narasimhiengar, Nuggehalli Sampath Iyengar	E	2
	Narasinga Rao, H. L.	E	2
	Narayanachar, Nilgiri	E	2
	Narayanan, Sivankoil Krishnamachar	E	2
	Narayana Rao, Haranahalli Subba Rao	E	2
20	Narayana Sastry, Amruthur Markandiah	E	2
	Narayana Murthy, Ayekavadi	C	1
	Paul Pothen	C	2
	Purushothama, Lakshimpuram Srinivasa Char	E	2
	Quraishi, Mohammed Habibulla	M	2
25	Rajanna, Sindaghatta Hiriyanaiya	C	2
	Ramachandran, Bangalore Venkatarama Iyer	C	2
	Ramaswamy, Budikote Chakravarti	M	2
	Ramaswamy, Heroor	E	2
	Rangaswamy, Kadaba	E	2
30	Rangaswamy, Salem Gopalaswamy	E	2
	Samuel Dhanaraj, D.	M	2
	Seetharamiah, Hadadi	C	1
	Seshadri, Erode Venkataramanan	M	1
	Shankara Rao, Channarayapatna	E	2
35	Sivasamban, Palayavalam Sivaramier	E	2
	Sivaswamy, Salagame Ranganna	C	2
	Sreenivasamurthy, H. Govindappa	C	2
	Srinivasa Murthy, Hesaraghatta Bheema Rao	C	2
	Srinivasa Murthy, Holenarsipur Govinda Rao	M	2
40	Srinivasan, Shamachar	C	2
	Srinivasa Rao, Kumsi	M	2
	Subba Rao, Saklespur	C	2
	Subba Rao, Bettadapur Venkata Krishnappa	E	2
	Thimmaiah, Kadappa	E	2
45	Vasantha, Ramanathapur Thippiah	M	2
	Venkatesh, Rangasubba Rao	C	2

10. M.B.B.S., 1940

Names	Class	
	Part I	Part II
Ahobalachar, Tirumale Srinivasachar	2	2
Ayodhyanath, Naib Subba Rao	2	2
Devanniah, Mysore Chennappa	2	Pass
Krishnamoorthy, Handanahall	2	2
5 Krishnamoorthy, Kattesomanahalli Venkatakrishnappa ..	Pass	2
Krishnafnurthy, Basavaptna Narasimhaiya ..	2	Pass
Krishna Rao, Hesaraghatta	Pass	Pass
Krishnaswami, Pudupakkam Doraiswamiengar ..	Pass	2
Loganathan, Mysore Lakshmana Mudaliar ..	2	2
10 Narayana Iyengar, Nuggihalli Ranganatha Iyengar ..	Pass	2
Pauline D'Costa	2	2
Rangiah, Settigar Karikallaiah	2	2
Sivashankara Mudaliar, Vellore Annamalai Mudaliar ..	2	2
Srirangamma, R. A.	2	2
15 Venkata Dasappa, Belvadi Narayana Rao ..	2	2
Venkata Ramiah, Magge Subba Rao	2	2

11. (a) L.M.P., October 1939

Names		Class
Ananthanarayana Rao, Belvadi Hiriyanaiya .. ..	..	2
Anantha Singh, D. .. ..	..	2
Chandrasekhara, Tarikere Chandappa .. ..	..	2
Damodaram, Sivasankaram .. ..	..	2
5 Dhruva Rao, Bowringpet Krishna Rao .. ..	..	2
Jayamma, Diana .. ..	..	2
Joshi, Krishna Moorthy Sivaram .. ..	..	2
Lakshmi Narayana Rao, Malavalli Narasimhaiah ..	..	2
Leela Bai, U. .. ..	..	2
10 Michael, Mercy Prasadamani .. ..	..	2
Nanjappa, Kambi Revappa .. ..	..	2
Rajoo Doriswamy .. ..	..	2
Rama Swamiengar, Seringapatam Narasimha Iyengar ..	..	2
Rangaswami Iyengar, Madenur Raghunathachar ..	..	2
15 Sadasiva Rao, Santhebachally .. ..	..	2
Shamanna, Thimmappaia Venkatanaranappa ..	..	2
Subramanya, Kanakanhally .. ..	..	2
Venkata Rao, Bhaktarahalli .. ..	..	2

11. (b) L.M.P., March 1940

Names					Class
	Anantha Padmanabhan, S.	..	..	..	2
	<i>Dharmavathamma, Hanumantha Raju</i>	..	..	..	2
	Ganeshiya, Shimoga Rangannanavara	..	..	..	2
	Gangaiah, Govindaiah	..	..	..	2
5	Hafiz Mir Abdul	..	..	..	2
	<i>Jayalakshmi, S.</i>	..	..	..	2
	<i>Jayamma, S.</i>	..	..	..	2
	Keshavamurthy, Kowsika Subbavadhani	..	..	..	Pass
	Krishna Chetty, Kikkeri Venkatappa Chetty	..	..	..	2
10	<i>Lakshamma, K. S.</i>	..	..	..	2
	<i>Leelavathi, Sundara</i>	..	..	..	Pass
	Padmanabha Rao, Yeldur	..	..	..	2
	Ramanujiah, K. T.	..	..	..	2
	Sambasivan, T. S.	..	..	..	2
15	Seshadri, Kadaba	..	..	..	2
	Shamanna Setty, Lakka Setty	..	..	..	2
	Sreenivasa Rao, B. Krishna Rao	..	..	..	2
	Srinivasa Murthy, Tumkur Pallakki	..	..	..	2
	Venkatachar, Jatavallabha	2
20	Venkataramana Setty, Boggaram Sreenivasiah	2
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